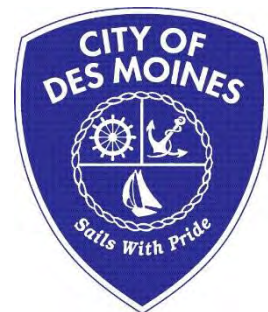




Redondo Parking Management Plan

Prepared for



May 2015

Prepared by

Parametrix

Redondo Parking Management Plan

Prepared for

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CITATION

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CERTIFICATION

The technical material and data contained in this document were prepared under the supervision and direction of the undersigned, whose seal, as a professional engineer licensed to practice as such, is affixed below.



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APPENDICES

- A Traffic Counts and Speed Data
- B Comments from Open House
- C List of Potential Solutions
- D Parking Meter Analysis

KEY TERMS

AWDT	average weekday trips
Boardwalk	Redondo Boardwalk
City	City of Des Moines
MaST	Marine Science and Technology
mph	miles per hour
Park	Wooton Park
Plan	Redondo Parking Management Plan
RPZ	residential parking zones
Salty’s/Salty’s Restaurant	Salty’s Waterfront Seafood Grill
TIP	Transportation Improvement Program

EXECUTIVE SUMMARY

The Redondo Parking Management Plan (Plan) identifies strategies to improve parking, safety, and traffic in the Redondo neighborhood of Des Moines, Washington. The focus of improvement is confined to the area between Redondo Beach Drive to the west, Sound View Drive to the east, South 281st Street to the north, and South 287th Street to the south.

Redondo is a largely residential neighborhood with minor commercial activity, including a restaurant and a marina. It is frequented by local residents but the majority of visitors are from outside the immediate area, especially in the summertime. Complaints by residents about lack of available parking, lack of safe pedestrian features, and excessive traffic indicated that Redondo is in need of a closer analysis of parking, safety, and traffic, especially during the high summer peak. Past City of Des Moines (City) reports and regulatory policies, as well as direction from the City Council, gave rise to the need to create strategies to optimize the area through implementable projects. City staff have partnered with Parametrix to develop this Plan through the following process:

- Field Data Gathering (traffic and pedestrian counts, speed studies, lighting analysis, and parking utilization data to identify existing conditions).
- Public Outreach (to receive input from residents, business owners, and the general public).
- Development of Implementable Projects (including location, description, and approximate cost, as well as possible funding options).

Section 6 of this Plan provides recommended projects to be considered as implementable measures to be constructed in the future. These projects focus on improvement to the parking, safety, and traffic operations of the area.

The Redondo Parking Management Plan should be used as a tool to guide the revitalization of the Redondo area through the implementation of these recommended projects. The study and investigation indicated that improved management of parking and pedestrian facilities would contribute to increased vehicle and pedestrian safety, as well as have a positive impact on the surrounding uses. This will ensure a more livable community, friendly to residents, commercial businesses, and visitors for years to come.

1. INTRODUCTION AND BACKGROUND

For decades, the Redondo neighborhood area has been a desirable place to live for local residents and an attractive place to visit for non-local residents. This is due to the scenic views of Puget Sound while walking along the wooden boardwalk, accessibility to a public boat launch, the quality of fishing and SCUBA diving opportunities, playing at Wootton Park, or simply dining at the famous Salty's restaurant. However, the Redondo neighborhood has experienced a downside as well. Most notably is the lack of adequate parking during peak usage times, pedestrian safety, and inefficient vehicular traffic flow during summer months when activity is at its peak. This has put a burden on the residents living in the area and is a growing source of frustration for the public visiting the area.

The goal of the Redondo Parking Management Plan (Plan) is to develop strategies to improve these issues. This document serves as a master plan for guiding specific project improvements related to:

- Parking.
- Safety (for pedestrians).
- Traffic.

A list of site-specific improvement projects for the area is included in Section 6. These projects were developed from a combination of the following:

- Review of the City of Des Moines regulatory policies.
- Field data collection, including traffic counts, speed data, pedestrian counts, and utilization of parking both for a summer Sunday (peak traffic) and on a Tuesday (non-peak traffic).
- Public outreach, including an open house to receive input from local residents, business owners, and the general public.
- Presentations to City Council to receive input on the Plan recommendations.

1.1 Study Area Background

Redondo is a small beachside community located in Des Moines, King County, Washington. It is situated 12 miles south of Seattle. For most of its existence, Redondo was an unincorporated part of King County until it was annexed by the City of Des Moines (City) around 1997. Today, Redondo is the southernmost of nine neighborhoods that make up the City of Des Moines. Outside of the study area, Redondo is bordered to the east and south by the City of Federal Way, to the west by Poverty Bay (Puget Sound), and to the north by the neighborhood of Woodmont in Des Moines.

The study area for this Plan is defined as the area between Redondo Beach Drive to the west, Sound View Drive to the east, South 281st Street to the north, and South 287th Street to the south, and is herein denoted as "Redondo." Exhibit 1-1 shows the overall study area.

In 2010, the Redondo area had a population of 10,401 inhabitants, with a median household income slightly above the Des Moines average of \$67,717. Although the neighborhood has a population with a median age of 37 years, the neighborhood contains many long-term residents that have lived in their

homes for decades. The housing prices in Redondo on average are much higher than the rest of the City of Des Moines, indicating upper middle-class inhabitants in the area.¹

The predominant means of accessing the Redondo neighborhood for visitors is by car, since the area is not served by public transportation.

1.2 Policy and Regulatory Background

Prior to this Parking Management Plan, the City of Des Moines had been discussing the need from a policy perspective of improving parking in Redondo, both to address the concerns of local residents and to increase economic vitality in the neighborhood.

In the 2009 City of Des Moines Comprehensive Plan, Des Moines outlined an overall goal to “Establish parking strategies that support economic activity, transportation, circulation... for existing and future land uses” (Goal TR 6) and to “create and implement a parking program that minimizes on-street surface parking [and] encourages shared clustered parking to reduce the total number of spaces needed” (3-03-06). The City subsequently recognized Redondo as one of the principle areas where there are parking issues and is a location that carries opportunity for “interconnections between economic and recreational expansion.”

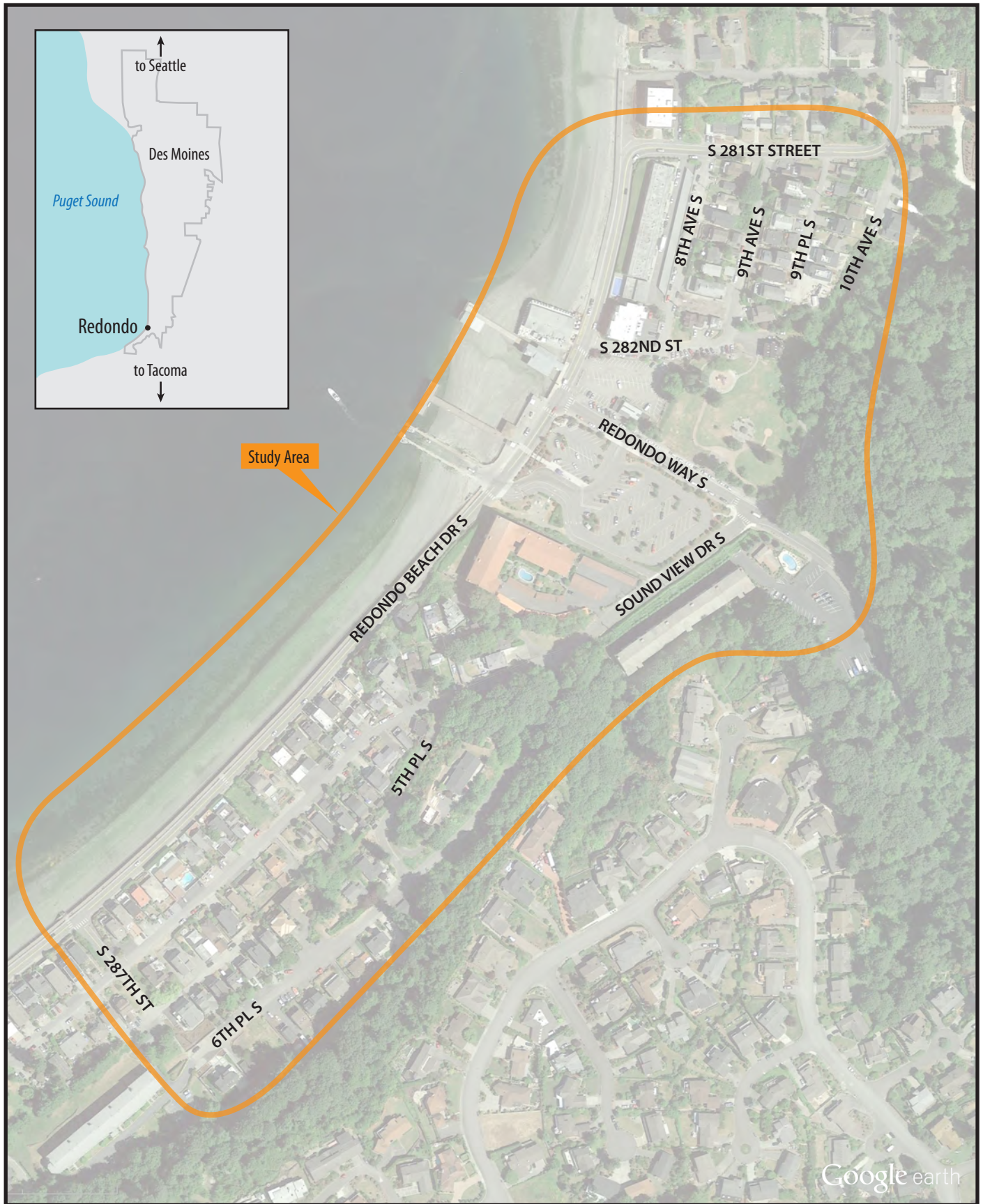
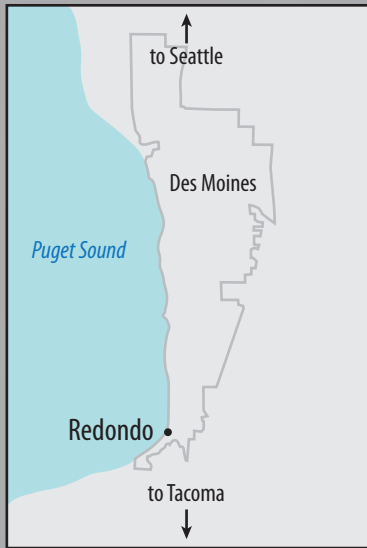
In the Des Moines 2013 Economic Development Policy Statement, the economic development strategy for Redondo specifically is to “consider the creation of parking improvements to encourage utilization of Gentry Square store site and Redondo commercial properties” and to “optimize the use of available commercial zoning.” The City has further stated an overall goal of creating “destination branding” for Redondo to generate economic activity.

The City of Des Moines outlines its parking regulations in Chapter 10.16 Parking Regulations of the municipal code. The City has adopted most sections of the Washington Model Traffic Ordinance (DMC 10.04.050) as applicable within Des Moines. However, the City did not adopt state level rules concerning parking meters and service parking.

¹ Source 1: <http://www.desmoineswa.gov/documentcenter/view/1520> (for Des Moines in general).

Source 2: <http://www.city-data.com/nbmaps/neigh-Des-Moines-Washington.html> (for the specific info on the Redondo neighborhood).

Source 3: <http://quickfacts.census.gov/qfd/states/53/5317635.html> (census info on Des Moines).



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**EXHIBIT 1-1
STUDY AREA**

1.3 Guiding Principles of the Redondo Parking Management Plan

The guiding principles used in the development of the Redondo Parking Management Plan include:

- Adherence to the City of Des Moines policies and goals;
- Understanding the current issues, using input from the residents and data collected in the field; and
- Developing feasible and implementable improvement projects and strategies.

The City's policies and goals, as described under Section 1.2, ultimately strive to create a parking program that supports the current and future land uses. This parking program will encourage utilization of the area to its fullest potential.

To fully understand the current issues within the study area, input from residents was received by inviting the adjacent neighborhoods to participate in a public open house and through field surveys. A variety of field data was obtained, including existing parking demand and utilization, traffic volume and speed, and pedestrian utilization. Gathering this information allowed the project team to understand how vehicles, bicyclists, and pedestrians currently use the existing facilities, and what concerns residents have with the current facilities.

The other key part of establishing recommendations is to ensure feasible options are developed which ultimately would be included in the City's Transportation Improvement Program (TIP). It is important that the solutions address the issues completely and not cause the same issues elsewhere. Maintaining the existing character of the surrounding neighborhoods is a meaningful factor in considering whether improvement options were feasible. It is critical that the solutions provided ways to improve the area and address the issues within the capacity of the City's Public Works and Transportation departments. Lastly, as with any recommendations, it is also crucial that the proposed recommendations and solutions were cost sensitive, understanding that funding is limited.

2. STUDY AREA AND LAND USE

Originally established as a resort, Redondo is said to be named after a settler from Redondo Beach, California. The principle hub of the neighborhood today is located around the Redondo Pier, Redondo Boat Launch, and Redondo Boardwalk. Adjacent to Redondo Beach Park is Salty’s Waterfront Seafood Grill (Salty’s/Salty’s Restaurant) and the Highline College Marine Science and Technology (MaST) Center, an aquarium that attracts students and visitors. In addition to the businesses and institutional uses, Redondo is also a popular site for recreational divers and fisherman. Apart from this, Redondo is highly residential.

Currently, the parking areas are used by a number of business, educational, and recreational clientele. Interviews with relevant stakeholders revealed trends regarding parking demand. In a field survey, the most common reasons for coming to Redondo by visitors is water recreation, nice weather, friends and family, dining, and casual walking (see Exhibit 2-1). The data indicates a higher use of both the park and recreational facilities in the area during the summer months.

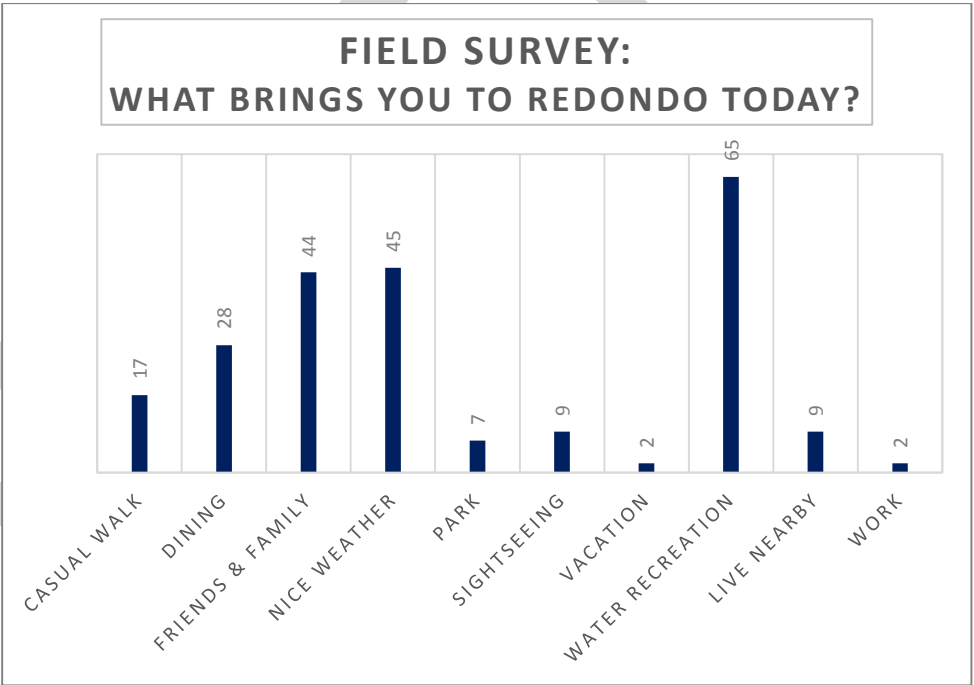


Exhibit 2-1. Field Survey: What brings you to Redondo today?

Outside of this central area, the Redondo neighborhood is predominately zoned as single family, with some public facilities and townhomes. The land use zoning is shown on Exhibit 2-2.

The Redondo area is classified as a geologically hazardous area (either as at risk for erosion or for landslides). In the past, weather related events have temporarily impacted the Redondo transportation infrastructure. These events included a November 2014 storm, which damaged the Redondo Boardwalk (Boardwalk). The City is currently working to restore the Boardwalk. In 1990, a storm washed out an area along Redondo Beach Road South, which has since been fully repaired.

2.1 Adjacent Land Uses

Exhibit 2-2 shows the adjacent land uses of the area. The land uses are described below.

2.1.1 Redondo Boardwalk and Redondo Boat Launch

The Redondo Boardwalk is a pedestrian attraction for locals and visitors. The Boardwalk provides access to the beach, fish pier, picnic area, restrooms, and the Redondo Boat Launch. The Redondo Boat Launch is open to the general public and used by recreational boaters and sporting fishermen. The use of the Redondo Boardwalk and Redondo Boat Launch vary through the year, with peaks of usage occurring during the summer and boating or fishing events such as Opening Day in May.

2.1.2 Salty's Restaurant

Salty's Restaurant is an upscale restaurant located along Poverty Bay. The restaurant is open from 11:30 AM to 9 PM most days, and is open earlier on the weekend for brunch. The restaurant has a small, private lot on the east side of Redondo Beach Drive adjacent to the establishment, which is signed for Salty's parking only. The parking lot contains approximately 57 spaces, most of which are compact, and the pavement in the parking lot is severely degraded. The lot contains a small building owned by Salty's, which is currently used for storage. Salty's management has indicated that they may plan in the future to convert this building into a casual, walk-up fish and chips restaurant with outdoor seating.

2.1.3 Highline College MaST Center

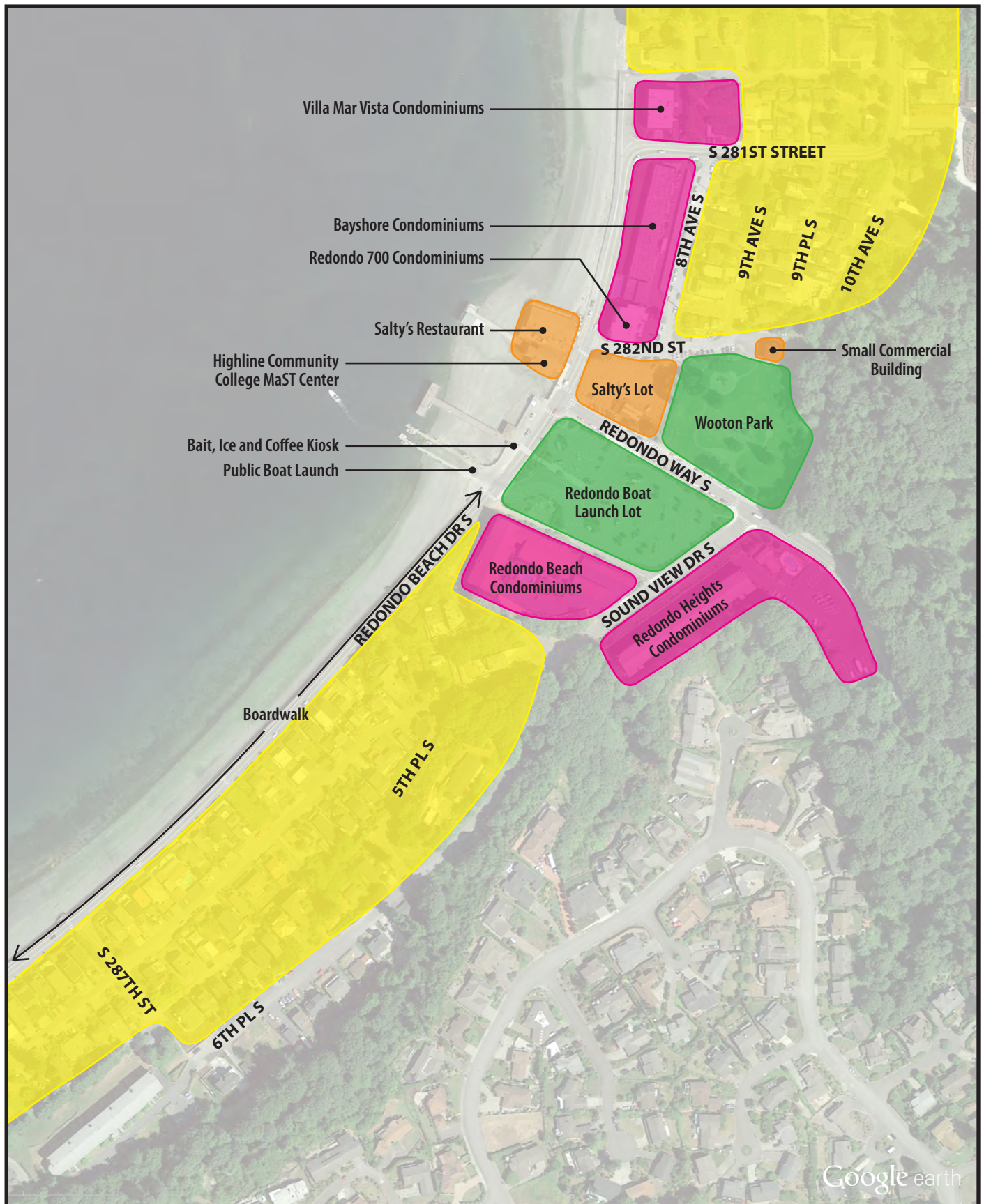
During the summer, the Highline College runs classes one day per week, and three days per week during the rest of the year. Class times are from 8 AM to 1:20 PM and the college is open to the public between 10 AM and 2 PM on Saturdays. The maximum occupancy of the site is 49 people and each laboratory class brings approximately 24 people to the site. The MaST Center tends to have the highest number of visitors on Saturdays between 10 AM and 2 PM.

There is currently an agreement on how many classes can be held at the MaST Center. However, the college has indicated in the past that they may expand the number of classes offered if this restriction were removed, although no expansion is currently planned.

One of the major constraints the college faces is the limited number of parking spaces for the number of students attending classes at the MaST Center. Students currently access the site predominately by driving and parking north of Salty's, because the MaST Center is not served by public transportation. The college would like to explore the idea of offering a shuttle service for students.

2.1.4 Wooton Park

Wooton Park (Park) is located just inland of the Redondo Beach Boardwalk adjacent to Redondo Way South. The park has a number of recreational areas, including a play toy, walking path, grassy field, and horseshoe pits. The Wooton Park Gazebo can be rented with a capacity up to 75 people. It is often used by students and visitors to the MaST Center.



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- COMMERCIAL
- RESIDENTIAL SUBURBAN ESTATES / PARK
- MULTIFAMILY RESIDENTIAL
- SINGLE FAMILY RESIDENTIAL

EXHIBIT 2-2 LAND USE MAP

2.1.5 Other Surrounding Businesses

In addition to Salty's Restaurant, there are a few other businesses within the study area. This includes a small commercial building located on South 282nd Street adjacent to Wooton Park and a seasonal bait, ice, and coffee kiosk located along Redondo Beach Drive South in front of the MaST Center.

2.1.6 Residential Developments

Most of the area along Redondo Beach Drive South is residential. To the north of the Salty's parking lot, the Redondo 700, Bayshore, and Villa Mar Vista condominium complexes line Redondo Beach Drive. South of the Redondo Boat Launch, the Redondo Beach condominiums are located along Redondo Beach Drive. The Redondo Heights condominiums are located on the southerly corner of Redondo Way South and Sound View Drive. Single family residential homes line the rest of the side streets in the study area. The condominiums each have designated parking, either as a parking garage or surface parking in a designated lot. The single family residential homes have driveways for parking. In addition, some homes have garages.

2.2 Roadway Network

Redondo Beach is located approximately 1.5 miles west of I-5, a half-mile west of State Route 99/Pacific Highway South, and one mile northwest from State Route 509. The major collector arterial roads serving the Redondo Beach area are Redondo Beach Drive South (which becomes South 281st Street/ 10th Avenue South/Marine View Drive South to the north and becomes 1st Avenue South to the south) and Redondo Way South (which connects Redondo Beach to Pacific Highway). All other roads near Redondo Beach are classified as local access roads and predominantly serve the residential neighborhoods.

3. EXISTING CONDITIONS

3.1 Public Parking

3.1.1 Parking Supply

There are 153-vehicle and 40-vehicle/trailer public parking spaces in the Redondo Beach area as shown in Exhibit 3-1. Public parking is currently allowed along 9th Avenue, 8th Avenue, 282nd Street, Sound View Drive, Redondo Way South, and in a paid lot managed by the Marina that has stalls for both vehicles and for vehicles/trailers.

Of the 153 public parking spaces for vehicles, 121 are located on streets, and only 34 spaces are located off the street in the Redondo Boat Launch parking lot. The majority of these on-street parking spaces are located along Redondo Way South adjacent to Wooton Park (44 spaces on Redondo Way and 25 spaces on South 282nd Street). The spaces are not striped as designated spaces, so often the cars park at an angle, perpendicular, and/or parallel, which can lead to some inefficient spacing of parked vehicles. Sound View Drive was recently improved, with 20 parallel spots located along the east side of the roadway.



Exhibit 3-1. Existing Parking Capacity

3.1.2 Parking Demand and Utilization

To determine the maximum seasonal usage of parking in the Redondo area, historical data from the Redondo Boat Launch parking lot usage was considered. This data contained parking lot usage for each day throughout an entire year. It illustrated that the highest usage of parking occurred during summer months on a Sunday between 4 and 6 PM. Although parking utilization fluctuates significantly throughout the year depending upon weather, Marina activities, and other events, the data collected for this study represents the greatest parking utilization.

Additionally, field observations of the number of cars parked was collected in August 2014 on a Sunday (capturing a peak summertime weekend time period) and Tuesday (capturing a peak traffic weekday time period). Data was collected between 4 and 6 PM in 15-minute intervals for the six different parking areas described in Section 3.1.1. Tuesday data represents a typical summer weekday for comparison purposes. The parking demand for the Redondo area is shown in Exhibit 3-2.

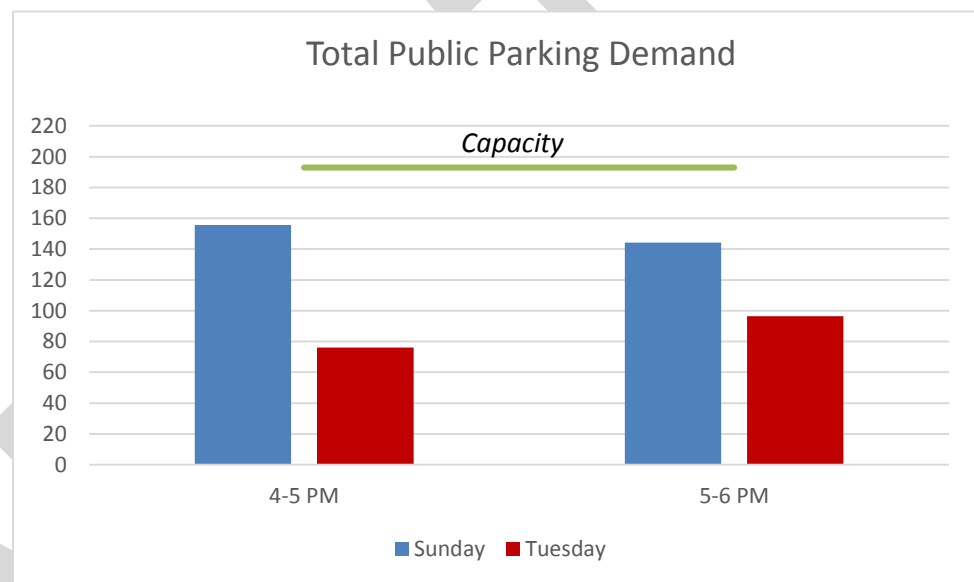


Exhibit 3-2. Total Public Parking Demand

As expected, the parking demand was much higher during the weekend (Sunday) than during a weekday (Tuesday). Parking demand was the highest, on average, for Sunday between 4 and 5 PM. On Tuesday, parking demand was highest between 5 and 6 PM. Utilization for all parking spaces in Redondo was highest on average between 4 and 5 PM on Sunday, at 81 percent (see Exhibit 3-3). Tuesday parking demand for the area was 50 percent of the total capacity (see Exhibit 3-4).

On-street parking is allowed on Sound View Drive and Redondo Way South. Surprisingly, during the periods observed, parking spaces were available on both roadways (see Exhibits 3-3 and 3-4).

In the Redondo Boat Launch parking lot, parking demand is significantly higher on Sunday than on Tuesday. On both Sunday and Tuesday, empty vehicle-with-trailer stalls were observed. However, cars (without trailers) exceeded the capacity provided. This indicates that cars were parking in the vehicle-with-trailer stalls or illegally parking along the circulating roadway within the parking lot.

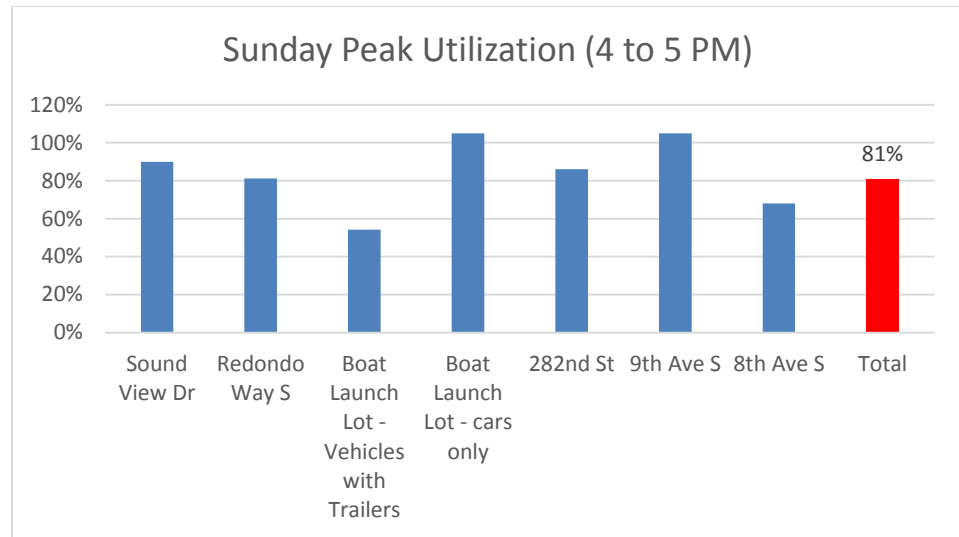


Exhibit 3-3. Sunday Peak Parking Utilization

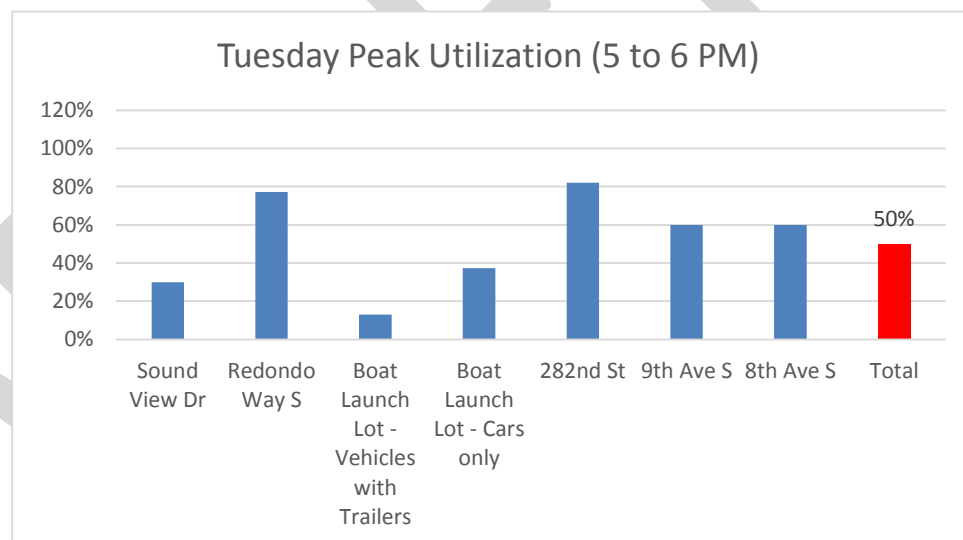


Exhibit 3-4. Tuesday Peak Parking Utilization

Along the residential streets of 282nd Street and 8th Avenue South, about 85 percent of the parking spots were occupied on Sunday. It should be noted that on 8th Avenue South, there are signs placed by residents indicating the areas in front of their home are no-parking zones. Demand on 9th Avenue South exceeded parking spots for the Sunday peak period, meaning vehicles likely were parked illegally which could include impeding the travel way, blocking driveways, or encroaching on an intersection sight distance. As with 8th Avenue South, residents have placed signs on 9th Avenue South indicating no-parking areas.

It should be noted that this data represents a “snap shot” of the summertime weekend and weekday conditions, and parking usage of the area may fluctuate dependent upon events. For example, it is likely that the boat and trailer stalls would experience higher utilization on the opening day of fishing season. Therefore, the recommended projects listed in Section 6 takes these parking fluctuations into account.

3.2 Traffic Conditions

3.2.1 Traffic Volumes

In order to determine projects that would also be compatible with the travelling public, information on traffic volume was needed to understand the traffic patterns throughout the area. Traffic counts using road tubes were collected during the same week as the parking data was collected, and the locations of these counts and the daily volume are shown in Exhibit 3-7.

3.2.2 Traffic Speeds

Redondo Beach Drive and Redondo Way were analyzed for possible speeding issues. The speed limit on these roadways is 25 mph. During a full week in August, road tube counts were placed along Redondo Beach Drive and Redondo Way collect the speed of each vehicle. The speed data collected would indicate the speed of every vehicle crossing the road tubes, and includes the day and time the vehicle crossed.

Typical speeds on Redondo Beach Drive and Redondo Way South fall within the 20 to 30 miles per hour (mph) range. Exhibits 3-5 and 3-6 below depict the distribution of speeds along Redondo Way South and Redondo Beach Drive South. The majority of speeds in all directions on these roads fall at or just a few miles per hour above the speed limit range, rarely exceeding 35 mph.

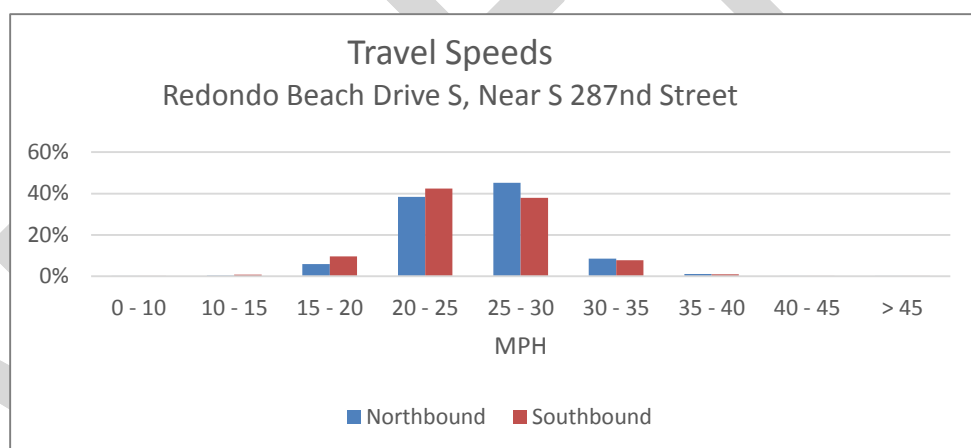


Exhibit 3-5. Travel Speeds on Redondo Beach Drive South

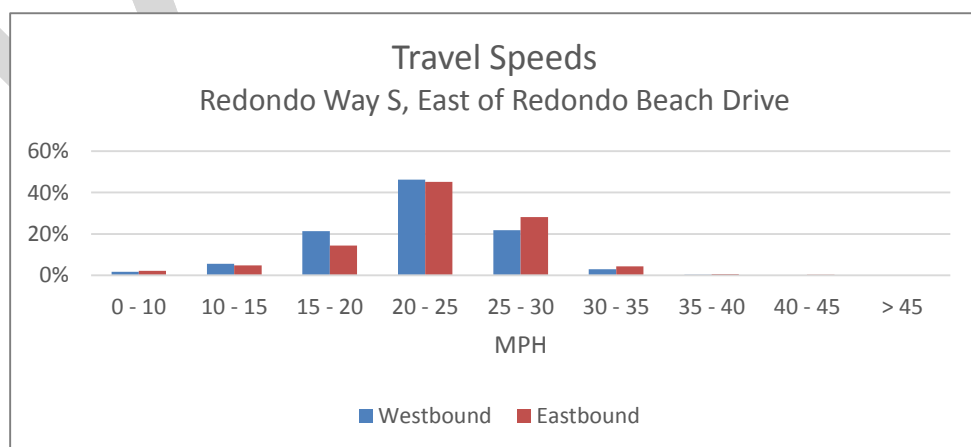


Exhibit 3-6. Travel Speeds on Redondo Way South



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**EXHIBIT 3-7
TRAFFIC COUNTS,
AUGUST 2014**

The speed limit along Redondo Beach Drive South and Redondo Way South is 25 mph. On average, 60 percent of cars were going at or below the speed limit during the day. The public, however, expressed concerns about an increased volume of traffic excessively speeding at night, including drag racing. Speed studies indicated 87 vehicles exceeded 45 mph during the 7 days that data was collected, 45 percent of which were during the day (5 AM to 8 PM) and 55 percent of which were during the night (8 PM to 5 AM). This validates the observation that there is an increase in occurrence of speeding during the nighttime hours. However, it should be noted that this number **represents less than one percent** of the total daily traffic.

Speed data collected in the field is included in Appendix A.

3.3 Pedestrian and Bicycle Safety

3.3.1 Existing Pedestrian Counts

Pedestrian counts were taken during a 12-hour time-frame (9 AM to 9 PM) on Sunday, August 17, 2014, at the Redondo Beach Drive and Redondo Way South intersection. The west sidewalk is the most heavily used by pedestrians (with a total of 2,261 trips), followed by the south crosswalk (1,515 trips), north crosswalk (775 trips), and east crosswalk (413 trips). These areas are shown in Exhibit 3-8.

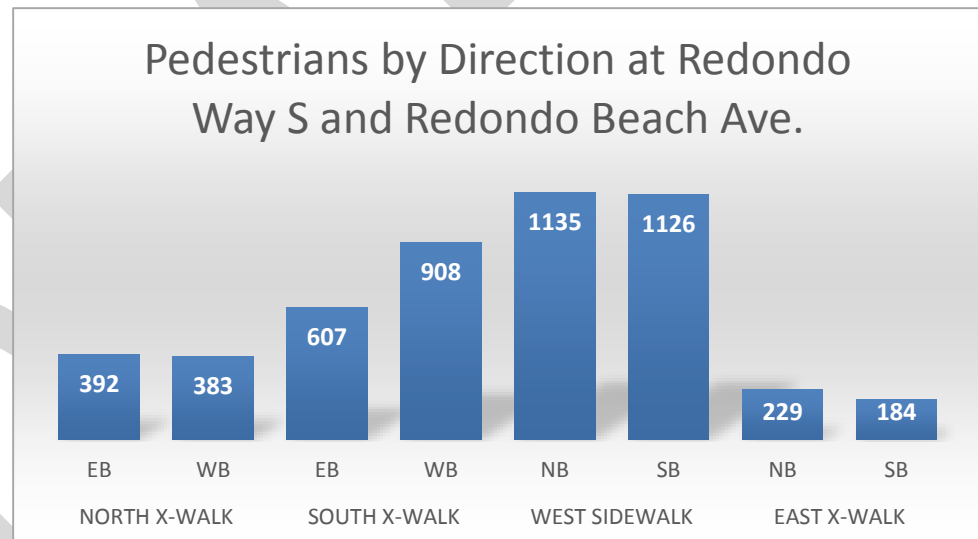


Exhibit 3-8. Existing Pedestrian Counts

Pedestrian volumes, on average, increased throughout the day, with the highest pedestrian traffic occurring between 8 and 9 PM (609 persons) and the lowest pedestrian volumes occurring between 9 and 10 AM (200 persons). This is shown in Exhibit 3-9.

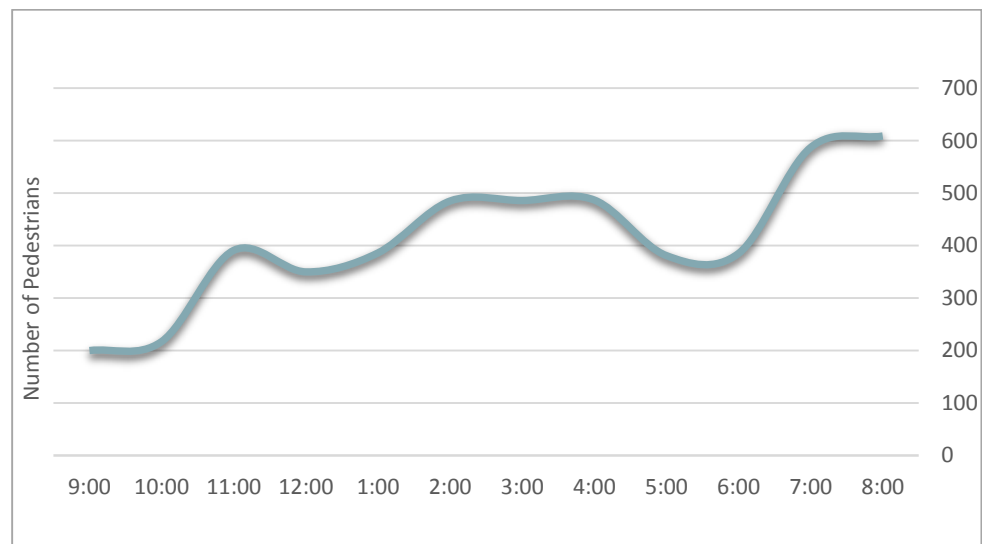


Exhibit 3-9. Daily Pedestrian Fluctuations

3.3.2 Pedestrian Facilities

Pedestrian access is managed via sidewalks and crosswalks, which are shown in Exhibit 3-10. There are several marked crosswalks on Redondo Beach Drive at the following locations:

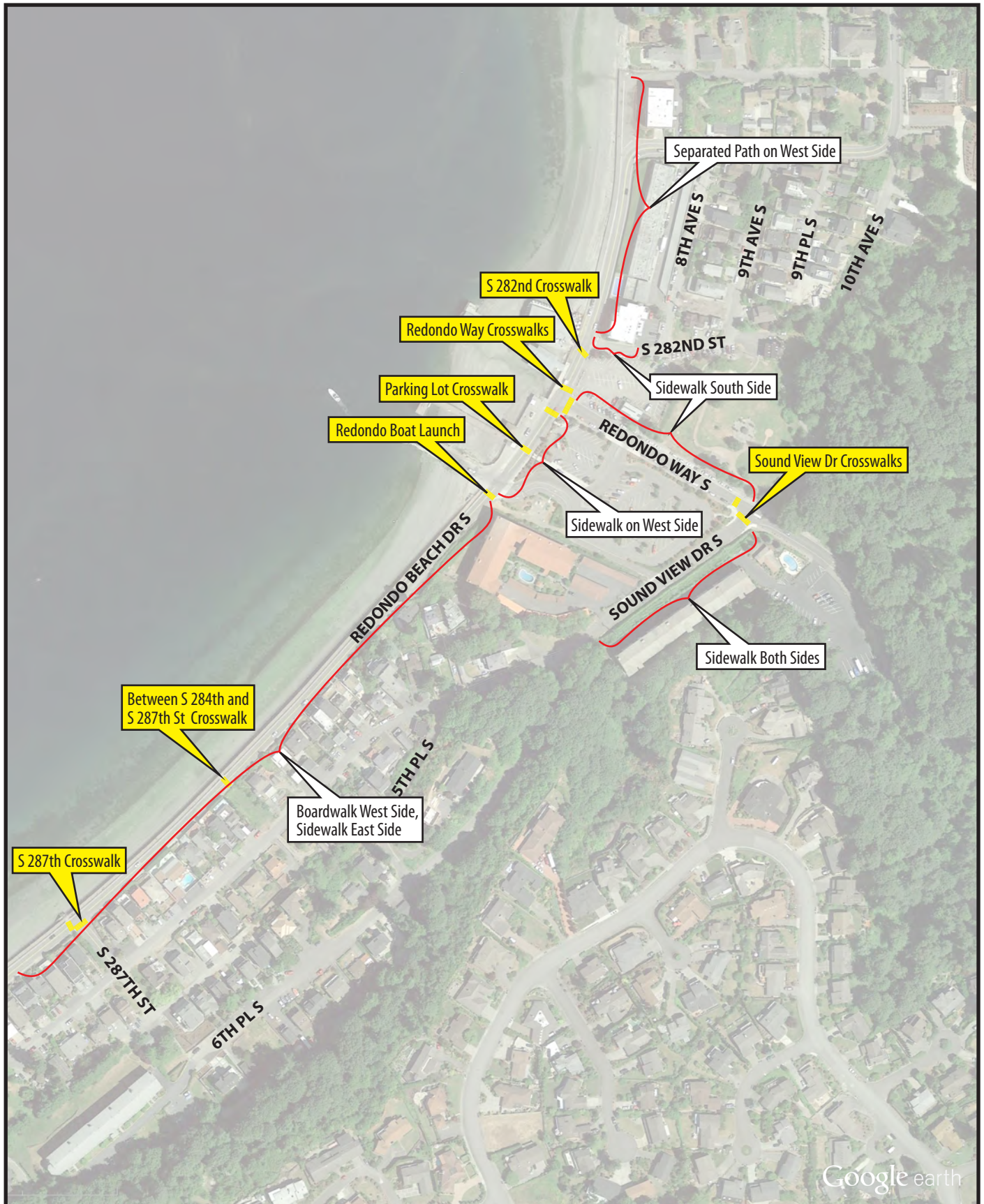
- **South 282nd Street**
This crosswalk is used mostly by the patrons of Salty's that park in the private Salty's parking lot and cross Redondo Beach Drive to get to the front entrance of the restaurant.
- **Redondo Way South (three crosswalks)**
These three crosswalks are mostly used by those parking on Redondo Way to access the Marina facilities. The crosswalks also serve as the main connection between Wooton Park and the Redondo Boardwalk.
- **Parking Lot**
This crosswalk is an enhanced crosswalk with decorative concrete pavement features and newer sidewalk, connecting the Redondo Boat Launch parking lot to the boat launch ramp. At this location, there is a stairwell leading down to the beach.
- **Boat Launch**
This crosswalk connects the Redondo Boardwalk to a small pathway between the Redondo Boat Launch parking lot and the Redondo Beach condominiums, ultimately reaching Sound View Drive.
- **Between South 284th Street and 287th Street**
This crosswalk provides a connection between the residential areas south of the Redondo Boat Launch parking lot to the Redondo Boardwalk. At this location, the Boardwalk has a stairwell leading down to the beach.
- **South 287th Street**
This crosswalk provides a connection between the residential areas south of the Redondo Boat Launch parking lot to the Redondo Boardwalk. At this location, the Boardwalk has a stairwell leading down to the beach.

In addition to the Redondo Beach Drive crosswalks, there are marked crossings on the west leg and south legs of the Sound View Drive/Redondo Way intersection.

Sidewalks are distributed intermittently throughout Redondo and include:

- *Redondo Beach Drive between South 281st Street and Salty's*
There is a path along the westerly side of the roadway, separated from vehicular traffic with curbing. There are no pedestrian facilities on the easterly side.
- *Redondo Beach Drive between Salty's and the boat ramp*
There is sidewalk along the westerly side of the roadway that transitions to a paved plaza area and stairwell access to the beach just south of the MaST Center.
- *Redondo Beach Drive between Redondo Way to the southern limit of the project area*
There is a sidewalk that exists along the easterly side of the roadway.
- *Redondo Beach Drive between the boat ramp to the southern limit of the project area*
There is a wooden boardwalk that exists along the westerly side of the roadway with access points leading to the beach. The Boardwalk is physically separated from vehicular traffic by a guardrail. The Boardwalk was damaged during a storm in November 2014 and is permanently closed until repairs are made.
- *South 282nd Street, along the southerly frontage of the Redondo 700 condominiums.*
This sidewalk does not have curb ramps at the northeast corner of South 282nd Street and Redondo Beach Drive.
- *Redondo Way along the southerly side between Redondo Beach Drive and Sound View Drive*
This is a mixture of newer sidewalk at each end and curb bulbs at the Redondo Boat Launch parking lot driveway.
- *Both sides of Sound View Drive between Redondo Way and the southerly side of the Redondo Beach condominiums frontage*
There is a mixture of newer and older sidewalks at intersections and driveways in this area.

With the exception of the Boardwalk, there are currently no barriers preventing pedestrians from crossing midblock or outside a crosswalk in these areas. In peak activity times (e.g., towards the end of the day), pedestrians crossing Redondo Beach Drive and vehicle conflicts are substantial, resulting in slow vehicles and traffic congestion. Local residents have also expressed concern about dangerous pedestrian behavior causing congestion on Redondo Beach Drive. Pedestrians often fail to cross the street using crosswalks, instead jay walking through traffic. This makes the long traffic queues already occurring at Redondo Beach Drive worse as slow-moving cars have to yield for pedestrians, resulting in both traffic and safety concerns.



Parametrix



SIDEWALK LIMITS

EXHIBIT 3-10 EXISTING PEDESTRIAN FACILITIES

3.3.3 Bicycle Facilities

The Redondo study area does not currently have designated bicycle facilities, such as bike lanes, sharrows, or other facilities. At the Marina near the dock entrance, there is a bike rack with a capacity of four to five bicycles.

3.3.4 Existing Lighting

Existing lighting locations for the public roadways in the study area were observed during the dark hours of an early morning in March 2015. These lighting locations are shown in Exhibit 3-11.

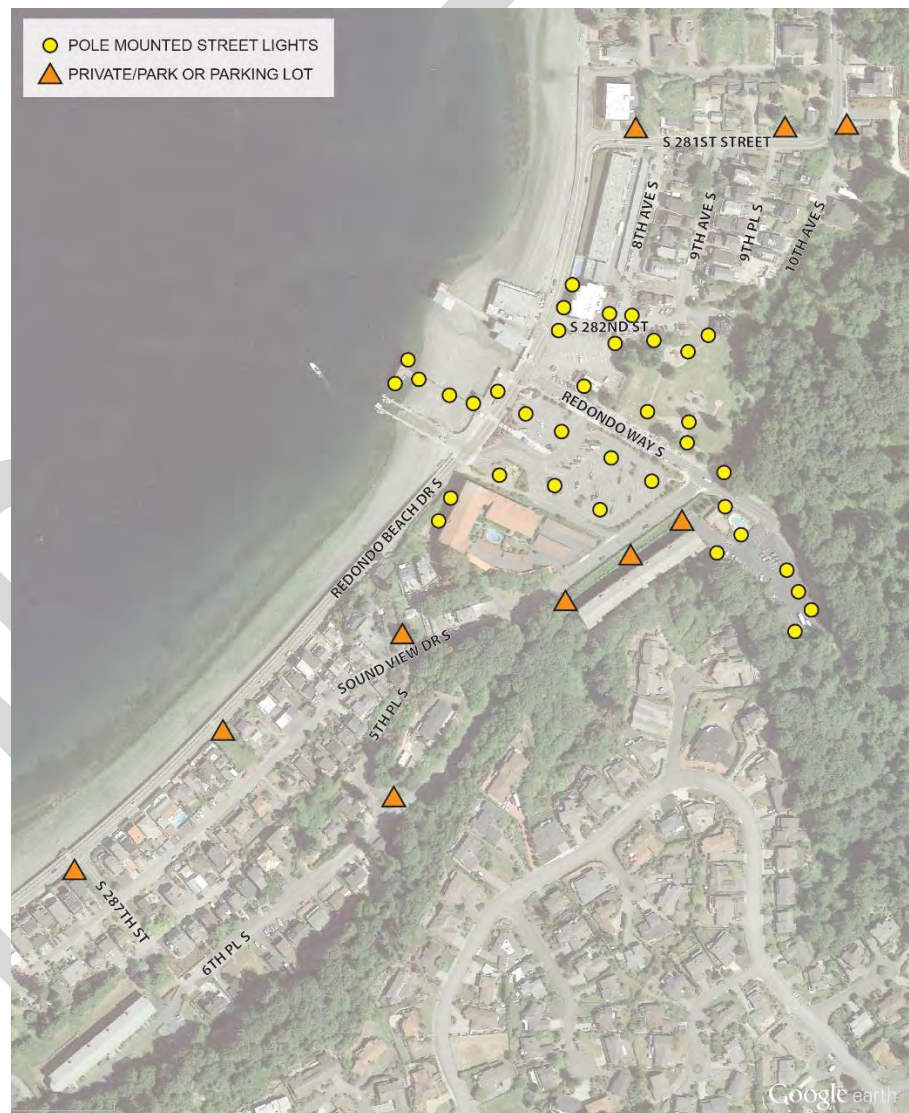


Exhibit 3-11. Existing Lighting Conditions

4. FUTURE NEEDS

With increased growth in the region, vehicle and pedestrian volume would be expected to also increase in the upcoming years, causing a further demand for parking. Redondo will likely continue to attract more visitors in the future as the City of Des Moines implements the economic development policy of revitalization of the commercial core for the area.

As of 2015, two new residential developments in Redondo are listed on the Development Activity Map on the City's website as having a preliminary plat approved for construction. A four-lot plat was approved by the City to build townhomes near the intersection of Redondo Beach Drive South and South 281st Street. Another preliminary plat for 77 townhomes was approved further east in a development known as Pacific Heights. There is currently discussions that Pacific Heights may be changed to single family residences with a reduction in the number of units/lots.

These new developments may slightly increase activity in the area with more people coming to visit friends and family who will inhabit these homes (one of the main reasons people cited for visiting Redondo Beach).

While no major commercial development is currently slated in Redondo, the development of this neighborhood as a commercial node remains as part of the City's Comprehensive Plan and in the City's Economic Vision Statement. Construction of infrastructure to support the revitalization of the area is a City goal.

4.1 Future Pedestrian Infrastructure Plans

In the City of Des Moines 2015–2034 Transportation Improvement Plan, the City outlines the following planned improvements for Redondo:

- *Redondo Boardwalk*
The City is currently assessing the damage of the November 2014 storm to the Redondo Boardwalk, and has secured funding to design the rebuild of the damaged sections, and partial funding to construct the improvements. Currently, the timing of the rebuild project is anticipated for late 2015.
- *Redondo Boardwalk Repairs (Priority No. 26; approximately \$220,000 to \$440,000 annually)*
This project uses City funds to repair/replace pilings and supporting decking as needed. This project is separate from the project to repair the damaged portions of the Redondo Boardwalk due to the November 2014 storm.
- *Redondo Way Sidewalk Project (Priority No. 35; \$310,000)*
This project includes installation of a curb, gutter, and sidewalk on the north side of Redondo Way between Redondo Beach Drive and Sound View Drive. Design is planned for 2017-2018, but construction is currently unfunded and may not occur until 2021 or later.
- *Redondo Beach Drive Sidewalk Project (Priority No. 48; \$600,000)*
This project is installation of a sidewalk and pedestrian improvements from the Redondo Boardwalk to the south city limits. The project is currently unfunded and is not planned for design or construction until 2021 or later.
- *Redondo Beach Drive and Redondo Way South (Priority No. 68; \$720,000)*
This project is construction of intersection improvements such as installing a traffic signal or other intersection improvements. This project is currently unfunded and not planned for design or construction until 2025 or later.

5. PUBLIC INVOLVEMENT

Outreach to the public to receive input on their concerns about parking, traffic, and safety occurred in several ways, including:

- An open house event.
- Correspondence with local businesses.
- Presentations to the City Council.
- General public input.

5.1 Open House

A public open house was held by the City of Des Moines and Parametrix on Wednesday, October 15, 2014. The public was invited to identify concerns and suggest opportunities for parking, traffic, and safety improvements in the Redondo area. The open house provided information on the process and schedule to develop the Redondo Parking Management Plan, as well as present the field data on parking occupancy, traffic volumes, speeding, and pedestrian uses. Potential solutions including ideas such as speed zone signing, street lighting, parking meters, flashing beacons at crosswalks, and many others were displayed for public input as well.

Overall, the public meeting was a success with more than 50 citizens in attendance, along with City staff and elected officials. The public was invited to identify on a map and describe on a worksheet locations of concern. Fifty (50) locations were identified on the map as problem areas. These maps and worksheets are included in Appendix B.

The comments were broken down into the following main issues:

- Parking issues, including blocked driveways (56 percent).
- Safety and traffic (crime – 16 percent, speeding – 16 percent, crosswalks – 11 percent).

Although identified as separate main issues throughout this Plan, input from the public often combined safety and traffic together. For example, one citizen had comments about the high number of crosswalks, leading to inefficient traffic flow and providing unsafe crossings for pedestrians.

5.1.1 Parking

Specific comments by the public involved parking issues in front of residential homes, blocked driveways, and blocked fire hydrants. Additionally, residents reported cars frequently block access to their mailboxes, which prevents the delivery of mail. During particularly busy times (summer months), cars parking on the street can block stop signs and make the road much narrower, especially when cars are parked on both sides of the street and in the wrong direction. This forces residents to have to walk in the streets instead of on the side of the road.

Residents stated concerns that if the choice was made to introduce paid parking along Redondo Way and Sound View Drive, the result would increase parking demand on other streets, thus increasing the other negative issues (blocked driveways, mailboxes, increased noise, crime, etc.). While some of the public did favor adding paid parking with parking meters, many others were against the idea of paid parking and wanted to make the Redondo Boat Launch parking lot free, so visitors would feel less inclined to park in front of residences and use the Redondo Boat Launch parking lot instead. Therefore,

all potential solutions that include implementation or revision to paid parking should also include consideration of the potential impacts to the surrounding residents.

5.1.2 Safety and Traffic

The public had concerns about pedestrian safety and traffic conditions throughout the area. They indicated that the narrow streets accompanied with poor visibility of oncoming traffic (specifically along Sound View Drive south of 5th Place South), increased traffic, and speeding are common safety concerns.

Another concern identified was pedestrian safety and operations, which included concerns about too many crosswalks and high pedestrian volumes causing traffic congestion and near-miss collisions between crossing pedestrians and vehicles.

The public expressed specific concerns about the types of visitors coming to Redondo to use Wooton Park, some of whom bring drug activity, prostitution, noise, and loitering, specifically on Sound View Drive and up the non-lit roadway of 6th Avenue. The public voiced the need for additional police presence and parking enforcement.

Other concerns voiced included after-hour use of the Marina and Redondo Boat Launch area and unwanted use of the east side of the Redondo Boat Launch parking lot.

5.2 Correspondence with Local Businesses

Outreach efforts to the Highline College MaST Center and Salty's Restaurant took place through emails and interviews.

Representatives of the MaST Center suggested several improvements for the area, to include increased police presence at night, improved street lighting, increased street lighting next to Wooton Park, the installation of surveillance cameras, a 911 call box, and a late night safety policy. In Redondo, the MaST Center representatives envision overall a more walkable, multi-modal community with enhanced beach access and sidewalks.

The owners of Salty's have a desire to enhance the existing building that is located in the existing Salty's parking lot. Currently this building is used for storage, but the Salty's owners have plans to convert the building to a casual fish and chips walk-up restaurant in the future. The Salty's owners also voiced concerns about pedestrian safety as pedestrians cross Redondo Beach Drive from the Salty's parking lot to the restaurant. Salty's owners have requested speed bumps and improved lighting for pedestrians crossing at South 282nd Street.

5.3 General Public Input

The general public has taken the opportunity to provide comments to the City through email, meetings, and through the City Council. Most of these comments raise similar concerns as what was brought up by the public at the open house. These comments have also been considered when developing potential solutions to the parking, traffic, and safety issues in Redondo.

6. PARKING MANAGEMENT AND OTHER RECOMMENDATIONS

After careful analysis of the City's goals and policies, the field data, and the public input, a number of site-specific projects were identified to address parking, safety, and traffic. A list of issues and potential solutions were developed in a basic form, taking into account public input, and are included in Appendix C. The effectiveness, pros/cons, feasibility, and potential cost of each solution were then identified. Those solutions that were determined feasible to construct are presented in this section and include:

Shorter Term Solutions (listed from highest priority to lowest priority):

- Project 1 - Consolidate Crosswalks on Redondo Beach Drive.
- Project 2 - Metered Parking Zones.
- Project 3 - Residential Parking Zones.
- Project 4 - Installation of Street Lights.
- Project 5 - Flexible Redondo Boat Launch Parking Lot.
- Project 6 - Installation of Driver Feedback Speed Signs.
- Project 7 - Installation of Other Signs.

Longer Term Solutions (not listed in priority order):

- Project 8 - Conversion of Portion of Wooton Park to Angled Parking.
- Project 9 - Reconfiguration of Salty's Parking Lot.
- Project 10 - Additional Parallel Parking on Redondo Way South.
- Project 11 - Signalization of Redondo Beach Drive at Redondo Way Intersection.
- Project 12 - Enhancement of Redondo Beach Drive at Redondo Way Intersection.

Shorter term solutions are identified as lower cost or more feasible to fund, which would bring immediate benefit to parking, safety, and/or traffic. Longer term solutions are typically higher in cost and would require funding strategies, which would take greater than 5 years to implement. Each proposed project is described in detail below and includes figures indicating the basic location and design.

6.1 Project 1: Consolidate Crosswalks on Redondo Beach Drive

6.1.1 Description

Remove up to three crosswalks located on Redondo Beach Drive between the boat ramp and Salty's restaurant. Maintain pedestrian crossings to the Redondo Beach Drive/Redondo Way intersection.

6.1.2 Need(s)

The needs for this project include:

- **Safety:** Five pedestrian crossings, including three midblock, create several vehicular-pedestrian conflict points across Redondo Beach Drive. A total of 2,703 pedestrians crossed at the Redondo Beach Drive/Redondo Way intersection on a Sunday in August 2014.
- **Traffic:** Multiple pedestrian crossings create situations where vehicular traffic must stop at random times and random places, creating inefficient traffic flow. Public comments stated that long traffic back-ups because of this inefficient flow has occurred all the way up South 281st Street and beyond.

6.1.3 Desired Outcome

The desired outcome for meeting the needs of this project includes:

- **Safety:** Improved pedestrian safety by reducing conflict points with vehicles.
- **Traffic:** Improved traffic flow and driver expectations.

6.1.4 Cost and Feasibility

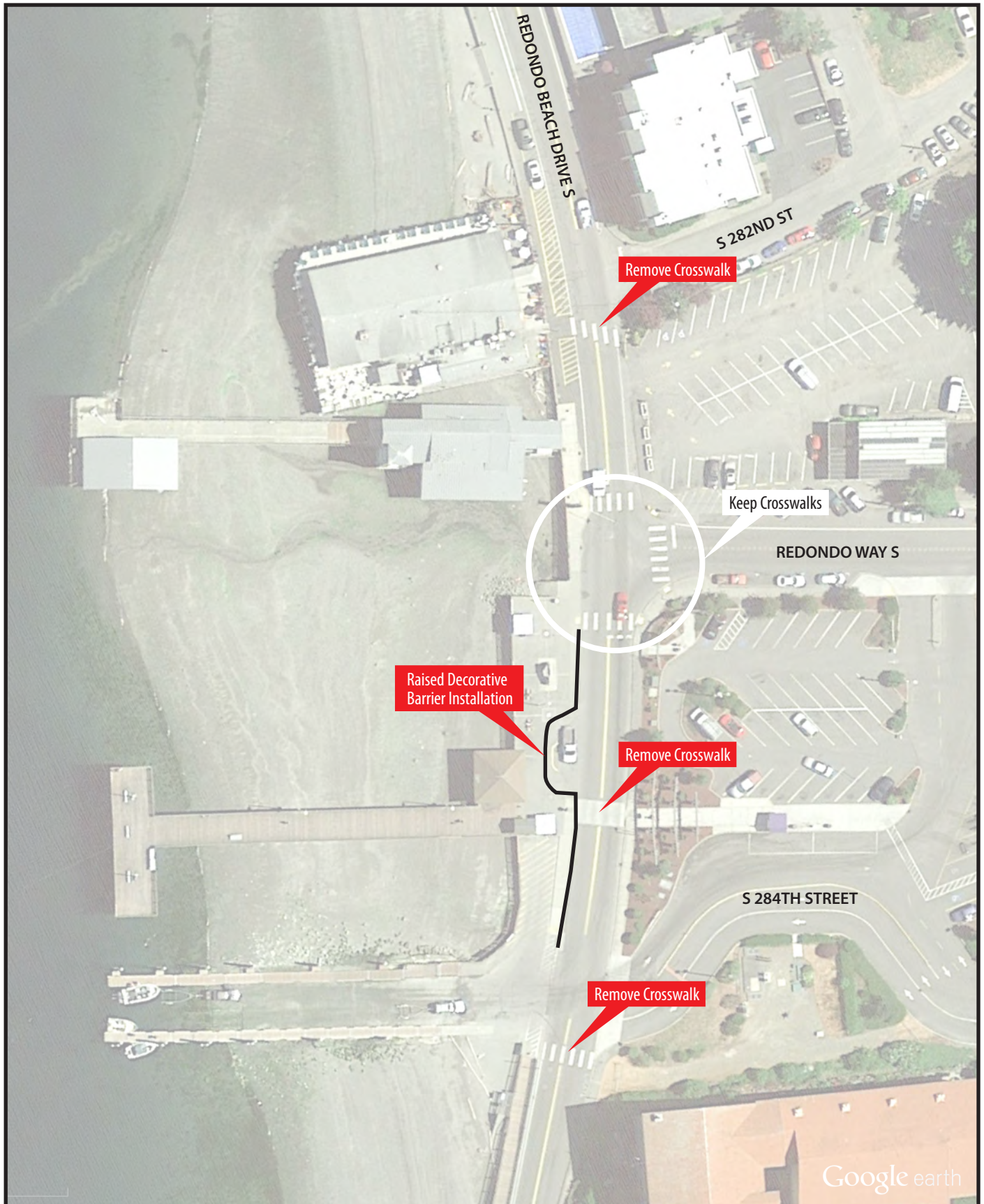
Costs for this project range from \$20,000 (simple striping and curb ramp removal) to \$150,000 (modification of Redondo Boat Launch lot crosswalk and installation of barriers).

This project can be constructed independent of other projects. However, removal of the Salty's Restaurant crosswalk without the construction of Project 9 (Reconfiguration of Salty's Parking Lot) would likely result in jaywalking where the crosswalk used to be located. Consolidation of the crosswalks could also occur in conjunction with Project 11 (Signalization of Redondo Beach Drive at Redondo Way Intersection).

Another consideration for this project should be removal of wheelchair ramps and installation of planters and/or decorative barriers along the west side to discourage jaywalking.

6.1.5 Financial Strategy

It is recommended that this project be placed on the City's Transportation Improvement Program (TIP), and that the City apply for funding through grants aimed to enhance pedestrian safety, which could include grants provided by the Transportation Improvement Board.



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**CONSOLIDATE
CROSSWALKS ON
REDONDO BEACH DRIVE**

6.2 Project 2: Metered Parking Zones

6.2.1 Description

Installation of 10 multi-space pay-by-display parking meters along Redondo Way, Sound View Drive, and South 282nd Street.

6.2.2 Need(s)

The need for this project is:

- **Parking:** The current parking demand during summer weekends results in the lack of available spaces and no revenue to pay for parking enforcement.

6.2.3 Desired Outcome

The desired outcome for meeting the need of this project is:

- **Parking:** Parking meters will help maintain appropriate levels of parking utilization, encourage users to comply with time limits, and bring in positive revenue per year to potentially help fund other projects listed in this Plan.

6.2.4 Cost and Feasibility

Costs for this project range from \$122,000 to install parking meters to \$222,000 to install meters and hire enforcement. Maintenance and enforcement could fluctuate between \$20,000 to \$250,000 depending upon equipment replacement needs and the amount of enforcement needed. Over a 20-year life cycle, these meters could generate a net present value revenue of approximately \$300,000 to \$1.68 million depending upon parking fees, enforcement amount, and parking utilization. See Appendix D for detailed information on cost analysis.

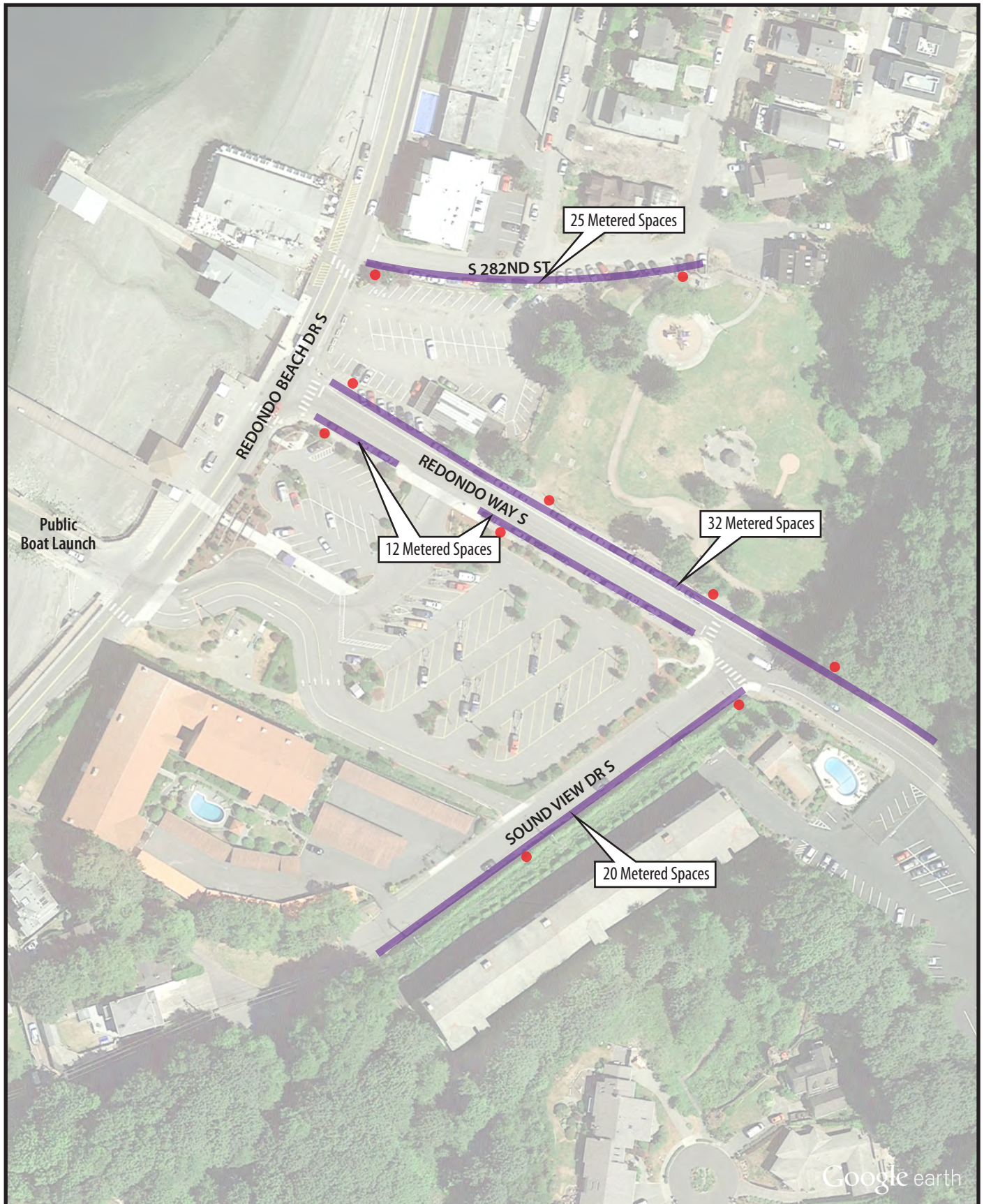
This project must include installation of “Residential Parking Only” signs along 8th Avenue South, 9th Avenue South, Sound View Drive south of South 284th Street, 5th Avenue South and 6th Avenue South to discourage vehicles from parking in front of the residential homes to avoid paying the parking fees. If parking violations become an issue along these residential streets, Project 3 (Residential Parking Zones) should be implemented.

This project could also be constructed with Project 10 (Additional Parallel Parking on Redondo Way South) to be able to adequately delineate and paint clear stall markings and numbers. This would result in an additional initial cost of approximately \$15,000 to install extra meters.

It is highly recommended that parking enforcement takes place during the early stages of implementation to encourage compliance. Cost for enforcement is detailed in the analysis in Appendix D.

6.2.5 Financial Strategy

The revenue generated by the meters should pay for construction and implementation within one to two years, depending upon the parking fee. It is recommended that this project be placed on the City’s Transportation Improvement Program (TIP), and the City begin coordination with specific parking meter manufacturers to determine the desired meter type.



Parametrix



● PAY-BY-DISPLAY MULTI-SPACE
METER LOCATIONS

**METERED PARKING
ZONES**

6.3 Project 3: Residential Parking Zones

6.3.1 Description

Designate 8th Avenue South, 9th Avenue South, 10th Avenue South, 5th Avenue South, and 6th Avenue South as residential parking zones (RPZ). Only residences with permits are allowed to park on these streets. This would affect approximately 100 residences.

6.3.2 Need(s)

The need for this project is:

- Parking: Residents have experienced parking overflow blocking their driveways, mailboxes, and creating sight distance issues along the residential roadways.

6.3.3 Desired Outcome

The desired outcome for meeting the need of this project is:

- Parking: Elimination of overflow parking on residential streets.

6.3.4 Cost and Feasibility

Costs for this project range from \$20,000 to \$60,000 to designate the RPZ, install signs, and issue permits. Enforcement and establishment of a hotline to report parking violations could cost approximately \$50,000 annually. In addition, the City Council must set up an ordinance which allows for illegally parked vehicles to be towed once reported.

This project can be implemented independent of other projects, but should be considered for implementation if Project 2 (Metered Parking Zones) is constructed.

6.3.5 Financial Strategy

A portion of the parking meter revenue from Project 2 (Metered Parking Zones) could fund this project.



Parametrix



RESIDENTIAL PARKING ZONES

6.4 Project 4: Installation of Street Lights

6.4.1 Description

Install street lights and/or low level pedestrian lights throughout the areas of Redondo that do not currently have lighting in the right-of-way.

6.4.2 Need(s)

The need for this project is:

- **Safety:** Dark areas throughout Redondo have experienced criminal activity late at night. In addition, drivers can have difficulty seeing pedestrians after sundown, especially in areas where there is high pedestrian activity.

6.4.3 Desired Outcome

The desired outcome for meeting the need of this project is:

- **Safety:** Lighted areas will help increase driver awareness to pedestrians and potentially reduce criminal activity.

6.4.4 Cost and Feasibility

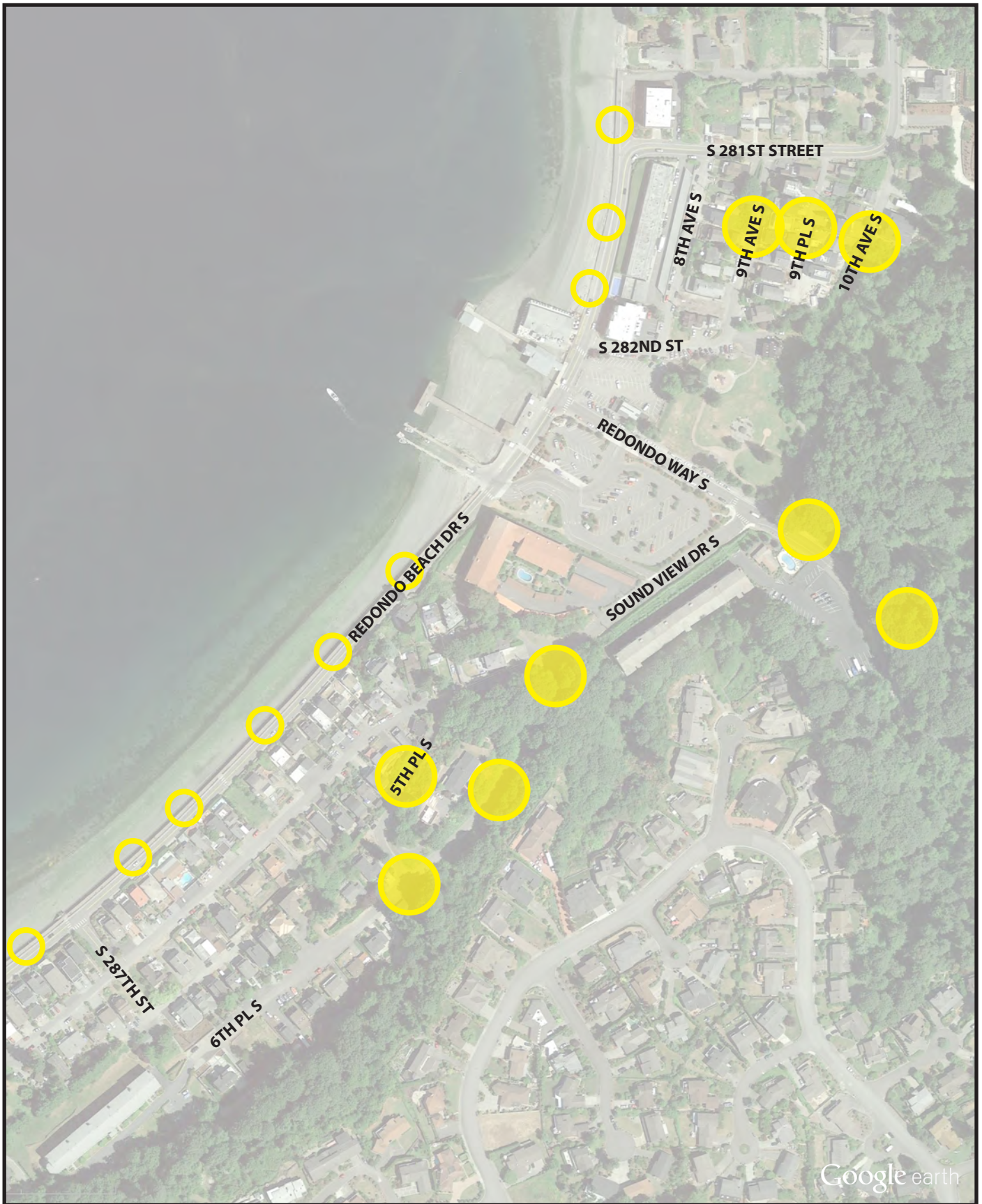
Costs for this project range from \$10,000 to 20,000 per streetlight depending on light type and power source location.

The low-level pedestrian lights should be designed such that the lights do not become a light pollution source for residents by dominating their views of the Puget Sound.

This project can be implemented as a part or independent of other projects, and implemented in phases as funding allows.

6.4.5 Financial Strategy

This project is recommended to be placed on the City's Transportation Improvement Program (TIP).



Parametrix



INSTALL STREET LIGHT

INSTALL LOW LEVEL
PEDESTRIAN LIGHT

**PROPOSED LOCATIONS FOR
NEW STREET LIGHTS**

6.5 Project 5: Flexible Redondo Boat Launch Parking Lot

6.5.1 Description

Designate the Redondo Boat Launch parking lot trailer parking as regular vehicular parking as demand allows.

6.5.2 Need(s)

The need for this project is:

- Parking: Field data indicated that on some summer weekends, existing vehicle parking is full while trailer parking had excess capacity. Because of lack of parking, vehicles use the City streets to park.

6.5.3 Desired Outcome

The desired outcome for meeting the need of this project is:

- Parking: Elimination of overflow parking on City residential streets. Allowing the trailer parking stalls to be used for vehicle parking would provide excess parking capacity.

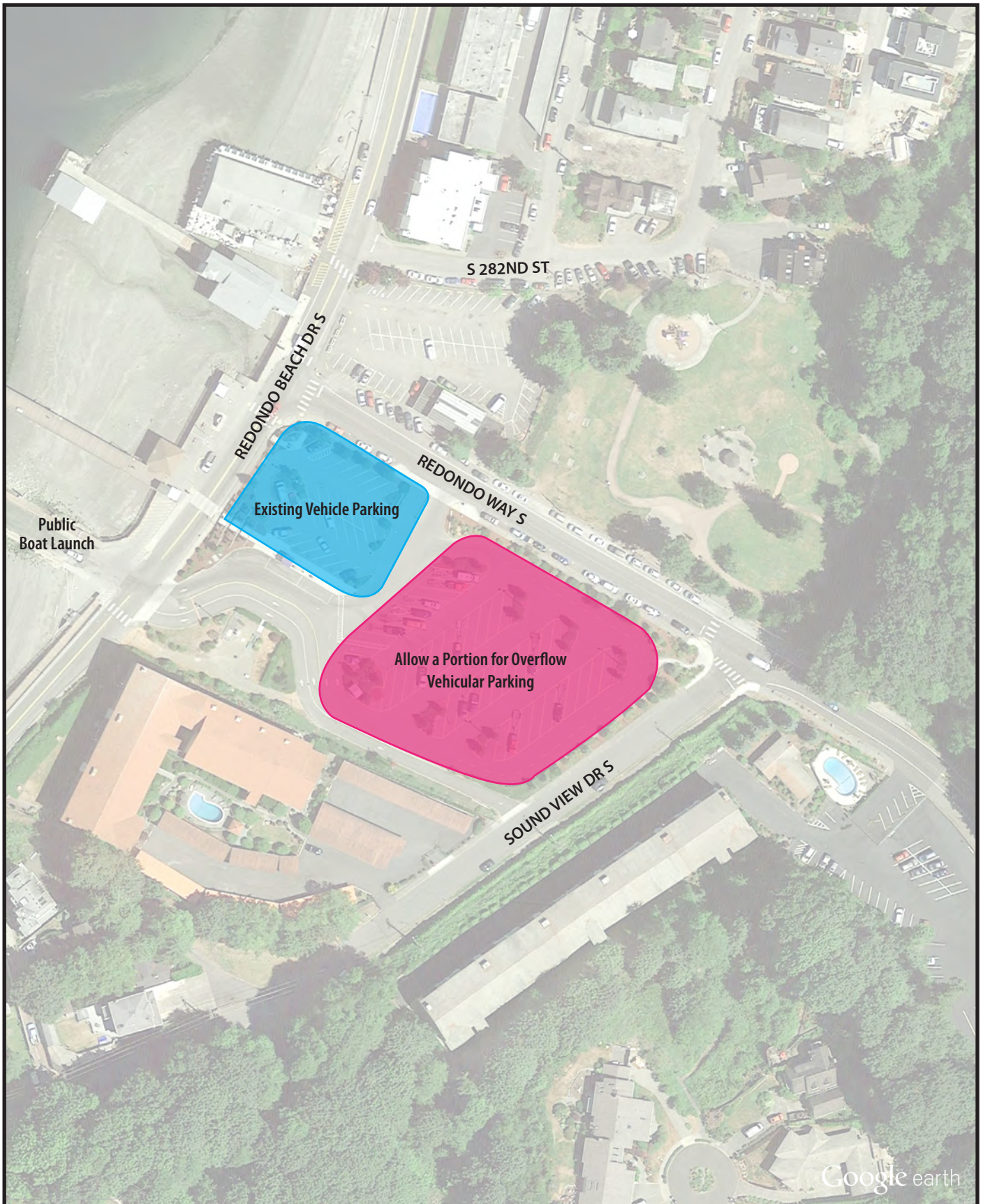
6.5.4 Cost and Feasibility

Costs for this project range from \$2,000 to \$5,000 to install signs and to set out/remove signs as demand allows.

This project can be implemented independent of other projects.

6.5.5 Financial Strategy

This project would likely be self-funding as overflow vehicles wishing to pay to park in the Redondo Boat Launch parking lot would have the ability to do so.



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**FLEXIBLE REDONDO BOAT
LAUNCH PARKING LOT**

6.6 Project 6: Installation of Driver Feedback Speed Signs

6.6.1 Description

Install speed signs, including flashing lights/radar feedback signs, on Redondo Beach Drive north of South 287th Street and on Redondo Way east of Sound View Drive.

6.6.2 Need(s)

The need for this project is:

- Safety: Field data indicates late night speeding and some daytime speeding occurs in these areas.

6.6.3 Desired Outcome

The desired outcome for meeting the need of this project is:

- Safety: Enhanced awareness of the lower speed limit of these areas.

6.6.4 Cost and Feasibility

Costs for this project range from \$30,000 (solar-powered) to \$40,000 (hard-wired) to install two signs.

This project can be implemented independent of other projects.

6.6.5 Financial Strategy

This project is recommended to be placed on the City's Transportation Improvement Program (TIP). This project could be funded as a safety enhancement utilizing the existing automated speed enforcement revenue.



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**INSTALLATION OF DRIVER
FEEDBACK SPEED SIGNS**

6.7 Project 7: Installation of Other Signs

6.7.1 Description

Install “Playground Sign (W15-1)” signs near Wooton Park, “No Parking” signs on Sound View Drive at reduced sight distance locations, and “No Parking Signs” at intersection approaches.

6.7.2 Need(s)

The need for this project is:

- Safety: Wooton Park and the surrounding areas have high pedestrian activity, including families with small children. Also, public input has indicated areas where parked vehicles are creating sight distance issues.

6.7.3 Desired Outcome

The desired outcome for meeting the need of this project is:

- Safety: Enhanced driver awareness of the children playing in the area. Elimination of sight distance obstructions.

6.7.4 Cost and Feasibility

The cost for this project is approximately \$100 per sign to purchase and install.

This project can be implemented independent of other projects.

6.7.5 Financial Strategy

Signs can be installed using the existing City Street Fund.

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6.8 Project 8: Conversion of Portion of Wooton Park to Angled Parking

6.8.1 Description

Convert the westerly portion of Wooton Park to an angled parking lot and include sidewalks bordering the Park.

6.8.2 Need(s)

The needs for this project include:

- **Parking:** Currently users of the park use Redondo Beach and South 282nd Street to park their vehicles. This results in a somewhat haphazard way of parking along South 282nd Street, which does not follow the City's Comprehensive Plan goal of minimizing on-street surface parking.
- **Safety:** Lack of clear designated parking spaces and pedestrian features creates unclear pedestrian and driver expectations.
- **Traffic:** Vehicles stopping to park along the streets result in delayed traffic on Redondo Way and South 282nd Street.

6.8.3 Desired Outcome

The desired outcome for meeting the needs of this project includes:

- **Parking:** Removes ten spaces on the street with fourteen new spaces off the street. This complies with the City's Comprehensive Plan to minimize on-street surface parking.
- **Safety:** Sidewalks and designated parking spaces provides clearer pedestrian and driver expectations.
- **Traffic:** Improved traffic flow and driver expectations.

6.8.4 Cost and Feasibility

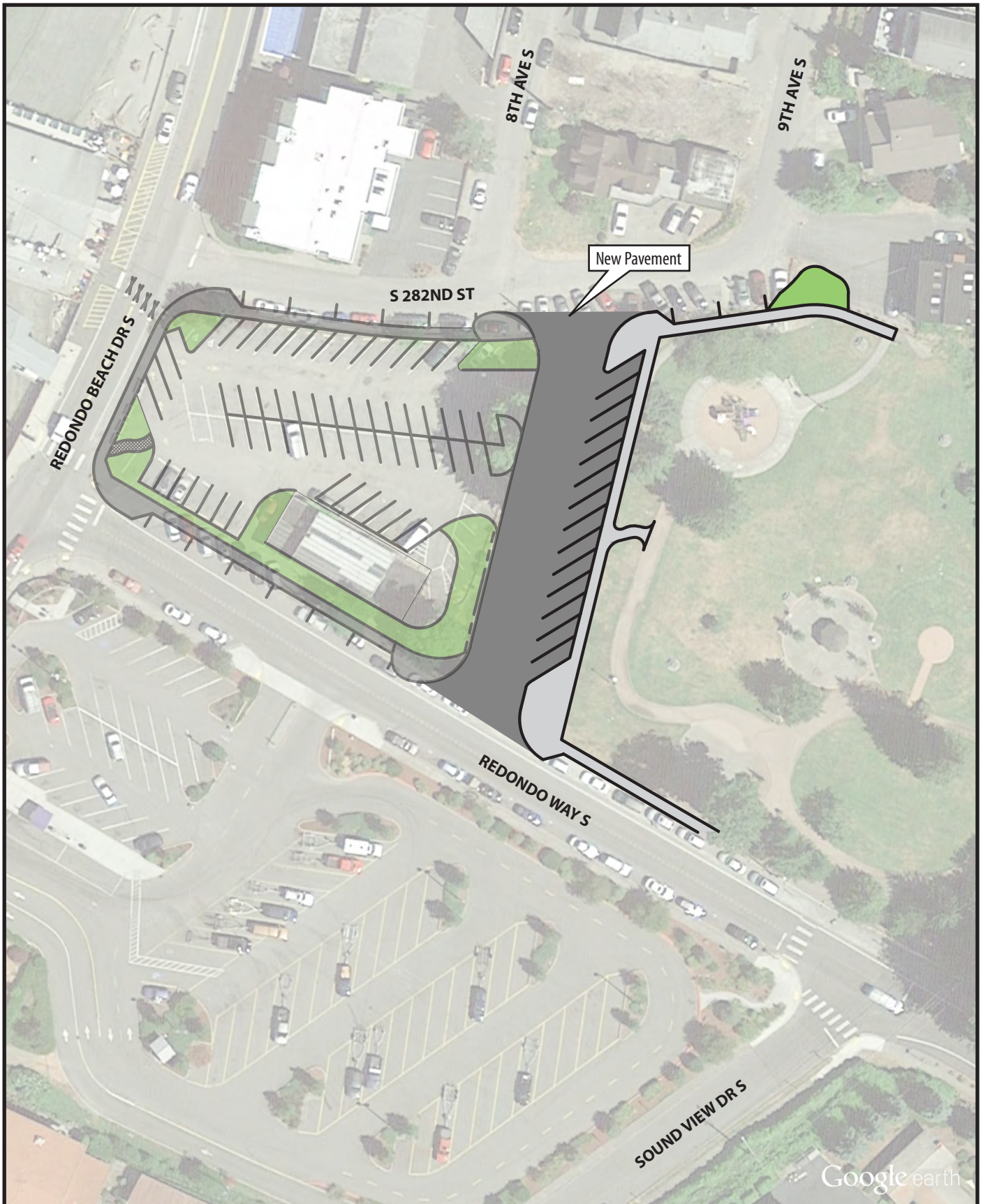
Costs for this project range from \$700,000 to \$1,000,000.

This project can be constructed independent of other projects. This project could be constructed in conjunction with Project 9 (Reconfiguration of Salty's Parking Lot).

The installation of this project will require the removal of the existing horseshoe pits. Upon review of the Park's interlocal agreement, as long as the parking is designated for Wooton Park, conversion of this portion of the Park is deemed acceptable. Additionally, City right-of-way to the east could be donated to the park for expansion.

6.8.5 Financial Strategy

It is recommended that this project be placed on the City's Transportation Improvement Program (TIP).



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**CONVERSION OF PORTION
OF WOOTON PARK TO
ANGLED PARKING**

6.9 Project 9: Reconfiguration of Salty's Parking Lot

6.9.1 Description

Reconfigure the striping and location of the access to Salty's parking lot to the east side, including pedestrian enhancements around the lot.

6.9.2 Need(s)

The needs for this project include:

- **Safety:** Existing driveway location and pedestrian crossing located on Redondo Beach Drive between Redondo Way and South 282nd Street contains numerous conflict points between pedestrian and vehicles.
- **Traffic:** Inefficient traffic flow along Redondo Beach Drive due to pedestrian crossings and vehicles turning into/out of the Salty's Restaurant parking lot.

6.9.3 Desired Outcome

The desired outcome for meeting the needs of this project includes:

- **Safety:** Significant decrease of pedestrian/vehicle conflicts.
- **Traffic:** Improved traffic flow on Redondo Beach Drive.

6.9.4 Cost and Feasibility

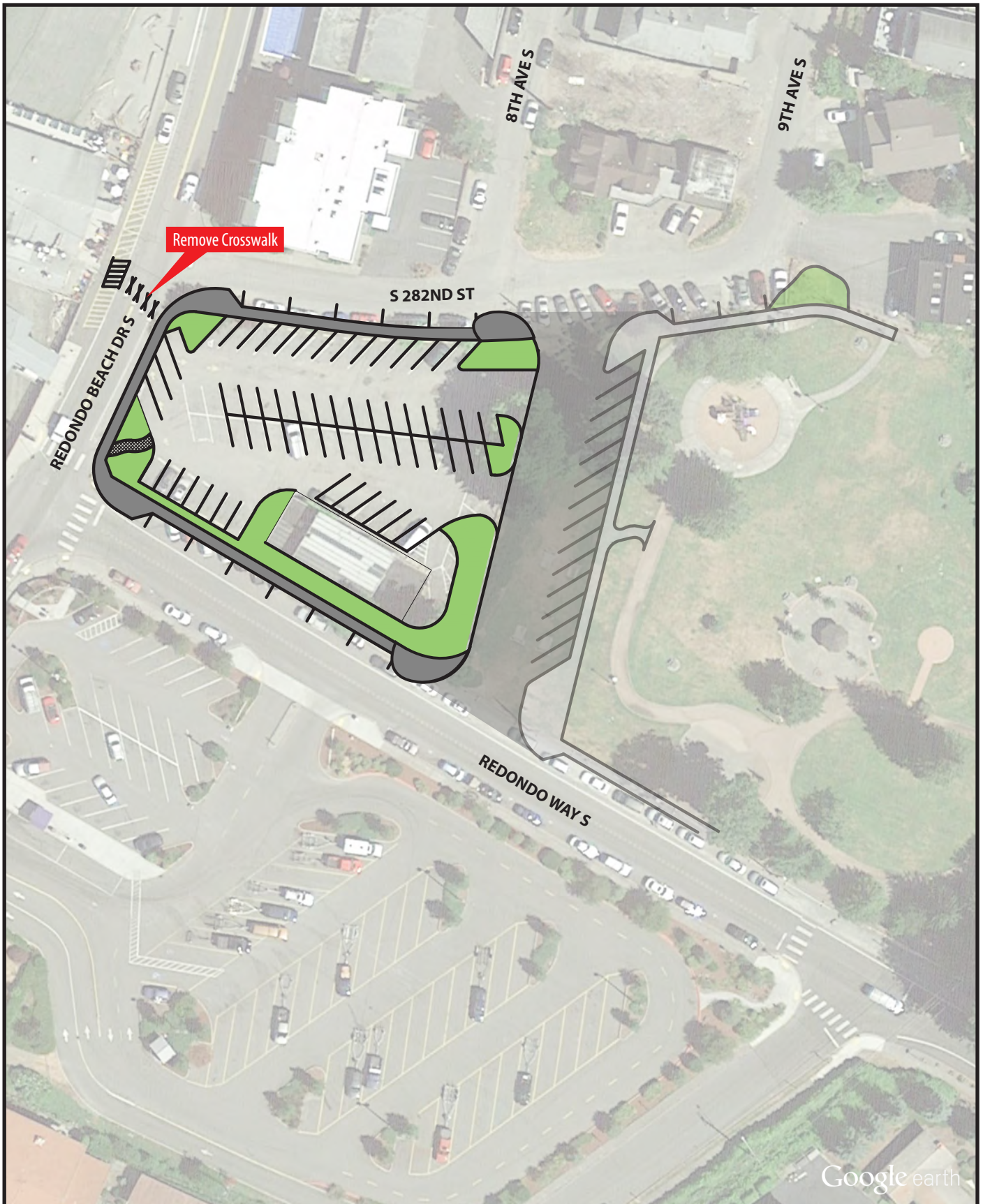
Costs for this project range from \$400,000 (sidewalks and restriping) to over \$1,000,000 (reconstructing entire lot, with upgraded drainage and sidewalks).

This project must be constructed with Project 8 (Conversion of Portion of Wooton Park to Angled Parking).

6.9.5 Financial Strategy

A partnership with Salty's Restaurant is recommended to determine possible funding strategies. Other possible grants include:

- TIB Urban Sidewalk Program (to help fund sidewalks around the site)
- TIB Stormwater Retrofit and LID Competitive Grant Program (if Low Impact Development for stormwater facilities were implemented)



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RECONFIGURATION OF
SALTY'S PARKING LOT

6.10 Project 10: Additional Parallel Parking on Redondo Way South

6.10.1 Description

Extension of parallel parking along Redondo Way South between Redondo Beach Drive to east of Sound View Drive. Also, construction of pathway connections to the parking in the Park.

6.10.2 Need(s)

The needs for this project include:

- Parking: Undelineated spaces result in inefficient parking.
- Safety: Lack of pedestrian facilities results in pedestrians walking along the gravelly shoulder adjacent to travelling vehicles.

6.10.3 Desired Outcome

The desired outcome for meeting the needs of this project includes:

- Parking: Delineated spaces result in more efficient parking.
- Safety: Pathway connections create a safer area for pedestrians to walk away from the roadway.

6.10.4 Cost and Feasibility

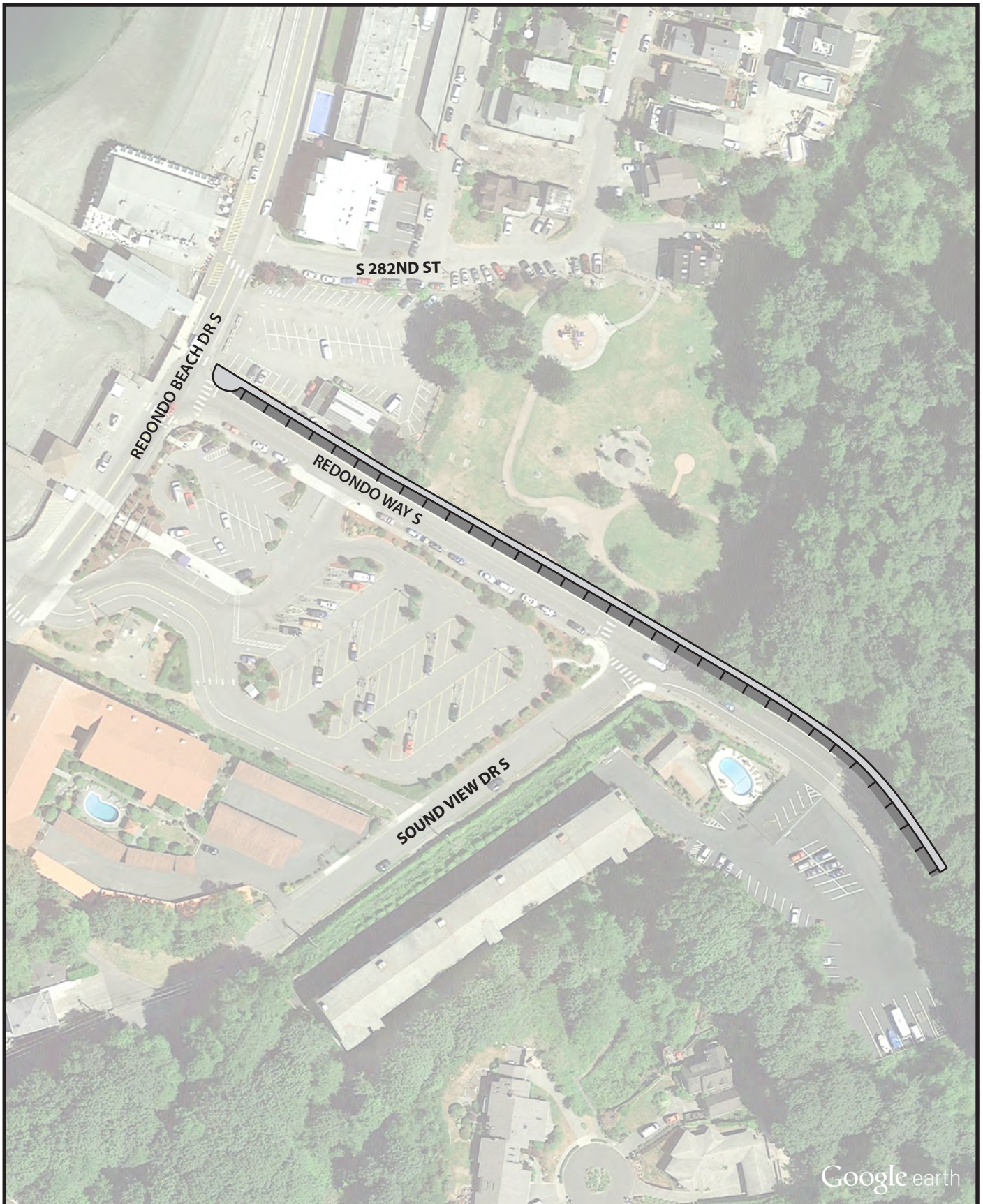
Costs for this project range from \$600,000 to \$800,000.

This project can be constructed independent of other projects, but could be designed in coordination with Project 8 (Conversion of Portion of Wooton Park to Angled Parking), Project 9 (Reconfiguration of Salty's Parking Lot), and Project 2 (Metered Parking Zones).

6.10.5 Financial Strategy

It is recommended that this project be added to the City's Transportation Improvement Program (TIP) Priority No. 35 (Redondo Way Sidewalk Project), and the City apply for funding through grants aimed to enhance pedestrian safety. Other possible grants include:

- TIB Urban Sidewalk Program



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**ADDITIONAL PARALLEL PARKING
ON REDONDO WAY SOUTH**

6.11 Project 11: Signalization of Redondo Beach Drive at Redondo Way Intersection

6.11.1 Description

Install a new traffic signal at the intersection of Redondo Beach Drive at Redondo Way.

6.11.2 Need(s)

The needs for this project include:

- **Safety:** The existing all-way stop and random arrival of pedestrians crossing Redondo Beach Drive results in a high number of vehicular-pedestrian conflicts (2,703 pedestrians versus 8,700 vehicles per day on weekends in the summertime).
- **Traffic:** Based on public input, the random nature of pedestrians crossing the street and peak traffic volumes results in traffic backing up all the way up South 281st Street and beyond at times. A signal warrant analysis indicates a signal is nearly warranted due to high pedestrian volume during summer weekends.

6.11.3 Desired Outcome

The desired outcome for meeting the needs of this project includes:

- **Safety:** Improved pedestrian safety by increasing driver compliance to potential stop conditions and increased lighting.
- **Traffic:** Improved vehicle delays, especially during the afternoon peak periods.

6.11.4 Cost and Feasibility

Costs for this project range from \$300,000 to \$450,000.

This project can be constructed independent of other projects. This project could be constructed in conjunction with Project 1 (Consolidate Crosswalks on Redondo Beach Drive) and Project 12 (Enhancement of Redondo Beach Drive at Redondo Way Intersection).

Although other methods of traffic control were considered, including roundabouts, flashing crosswalks, etc., a traffic signal was determined to provide the best solution to maintain safe and efficient traffic control for vehicles and pedestrians during peak seasons. For off peak times, the signal has the flexibility to remain red flashing mode.

6.11.5 Financial Strategy

This project is currently identified on the City's Transportation Improvement Program 2015-2034 (TIP Project Number INT-5.0, Priority No. 68).

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6.12 Project 12: Enhancement of Redondo Beach Drive at Redondo Way Intersection

6.12.1 Description

Install aesthetic enhancements at the Redondo Beach Drive/Redondo Way intersection using scored pavement, raised intersection table, patterned sidewalks, and decorative streetscape features such as bollards making the intersection a “centerpiece” of the Redondo area.

6.12.2 Need(s)

The need for this project is:

- Safety: Speed data and public input indicates that there is late night speeding issues on Redondo Beach Drive, even with the stop sign at Redondo Way. With the installation of a traffic signal (Project 8), the speeding concern could remain as these vehicles would potentially have a green light instead of a stop sign at Redondo Way.

6.12.3 Desired Outcome

The desired outcome for meeting the need of this project is:

- Safety: An intersection table would provide traffic calming on Redondo Beach Drive, as the table would essentially serve as a speed bump. An intersection table could increase driver awareness to the pedestrian crossing.

6.12.4 Cost and Feasibility

Costs for this project range from \$200,000 to \$500,000, depending on the extensiveness of the enhancements.

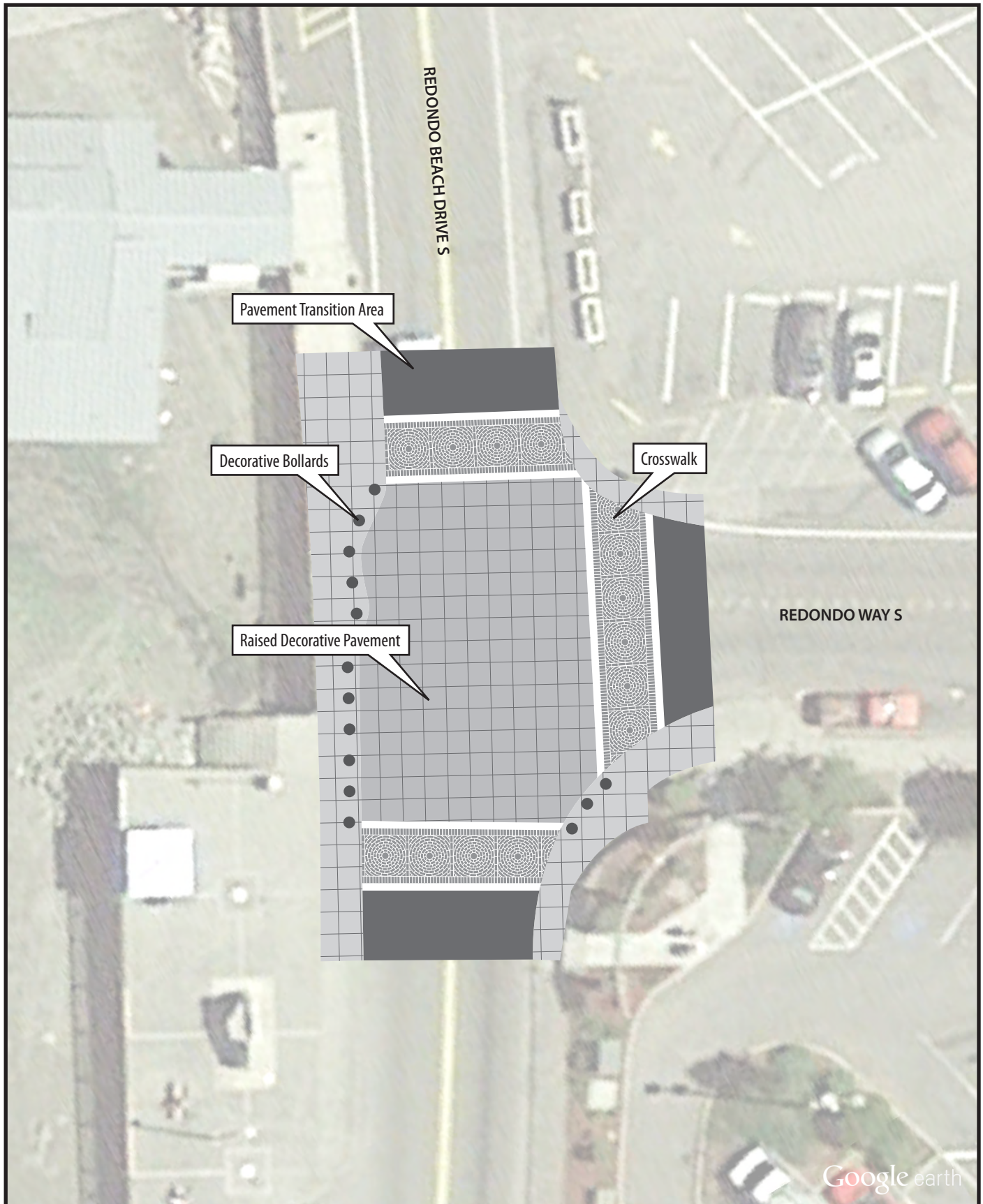
This project can be constructed independent of other projects. However, this project could also occur in conjunction with Project 11 (Signalization of Redondo Beach Drive at Redondo Way Intersection).

Other typical traffic calming devices were considered, including curb bulbs and narrower lanes. However, due to the high number of vehicles with trailers that navigate the area, these other devices were not carried forward.

6.12.5 Financial Strategy

It is recommended that this project be placed on the City’s Transportation Improvement Program (TIP), and the City apply for funding through grants aimed to enhance pedestrian safety. Other possible grants include:

- TIB Urban Sidewalk Program (sidewalks enhance pedestrian safety).



Parametrix



ENHANCEMENT OF REDONDO BEACH DRIVE AT REDONDO WAY INTERSECTION

Appendix A

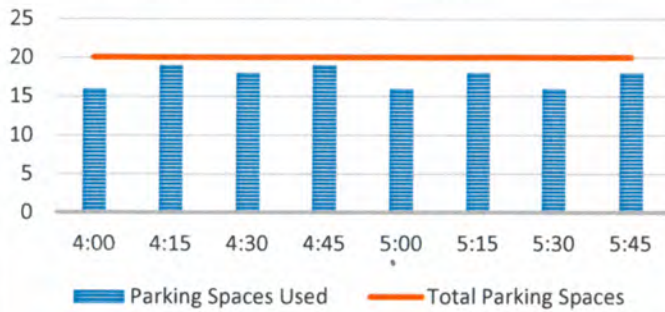
Traffic Counts and Speed Data



PARKING DEMAND ANALYSIS

Sunday

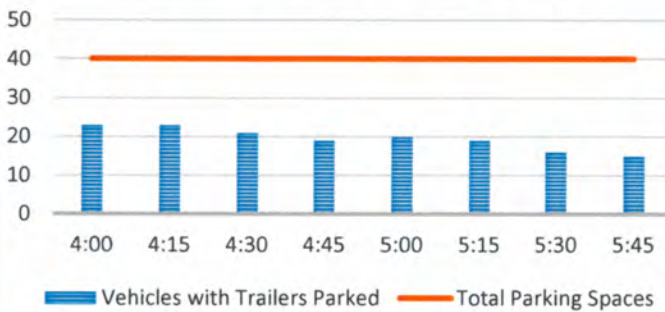
SOUND VIEW DRIVE S



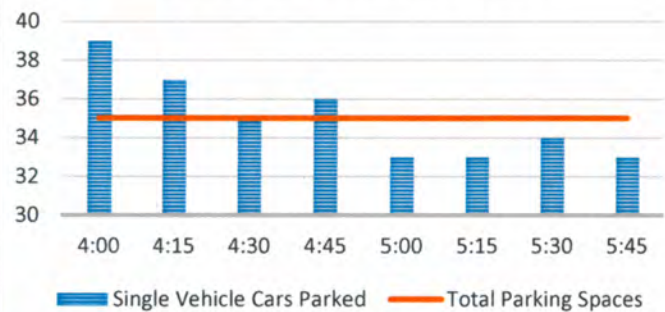
REDONDO WAY S



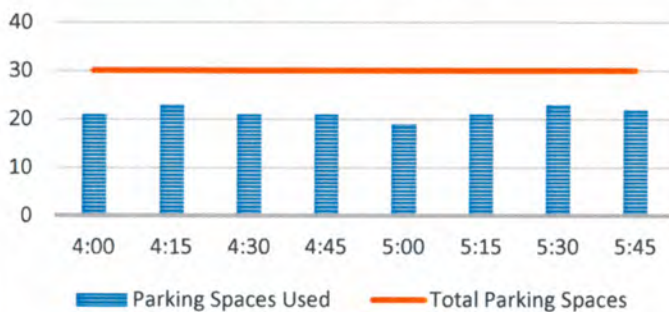
LARGE LOT - TRAILERS



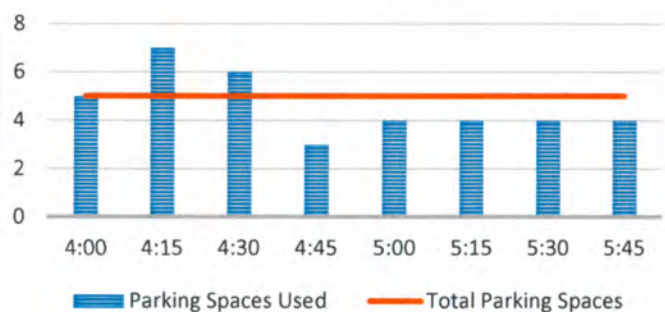
LARGE LOT - CARS



282ND STREET



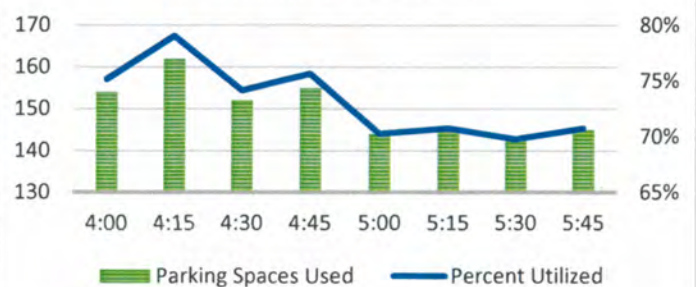
9TH AVENUE SOUTH



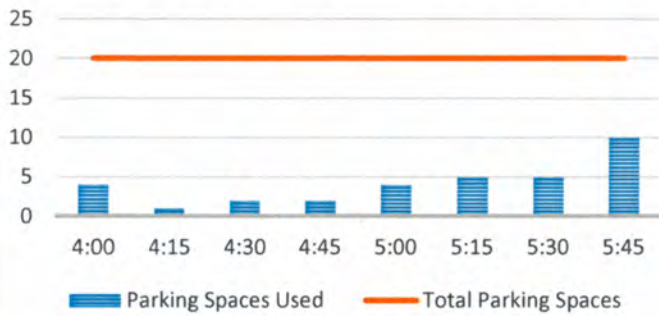
8TH AVENUE SOUTH



TOTAL STUDY AREA PARKING USAGE



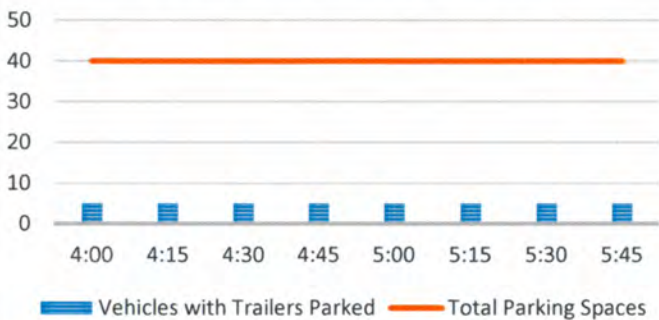
SOUND VIEW DRIVE S



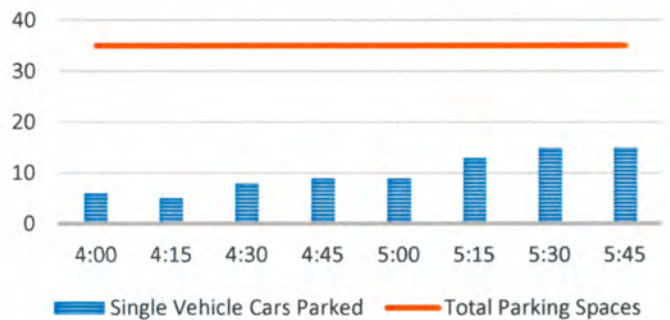
REDONDO WAY S



LARGE LOT - TRAILERS



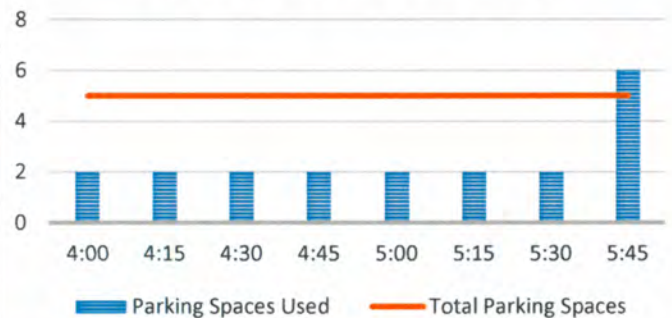
LARGE LOT - CARS



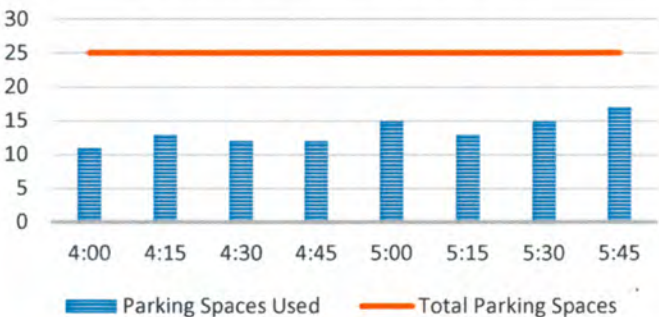
282ND STREET



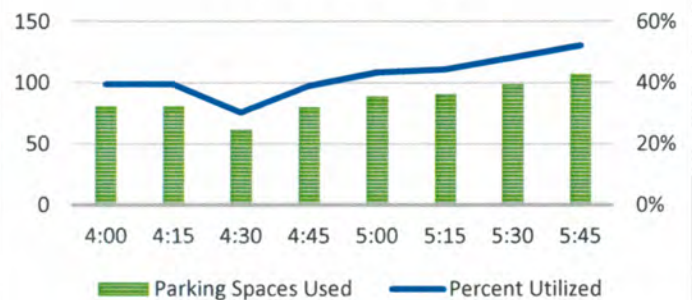
9TH AVENUE SOUTH



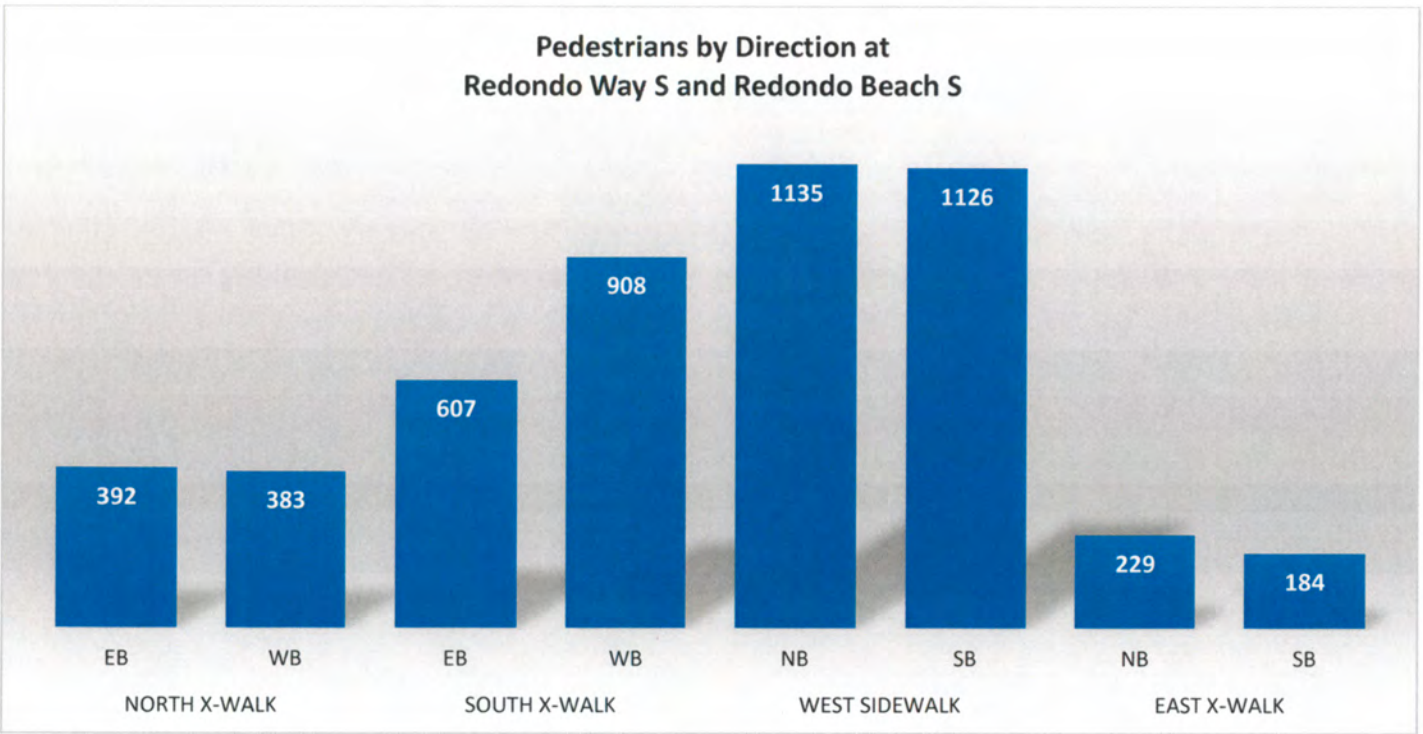
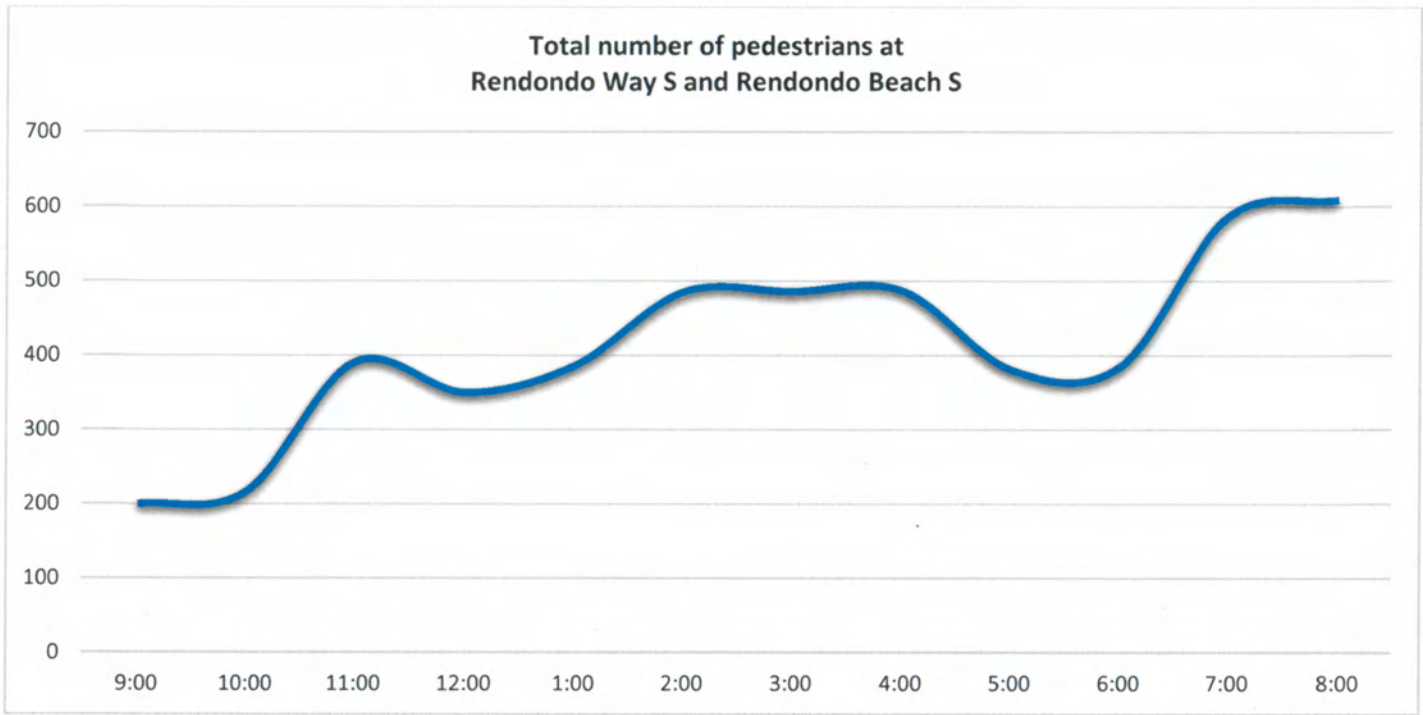
8TH AVENUE SOUTH



TOTAL STUDY AREA PARKING USAGE

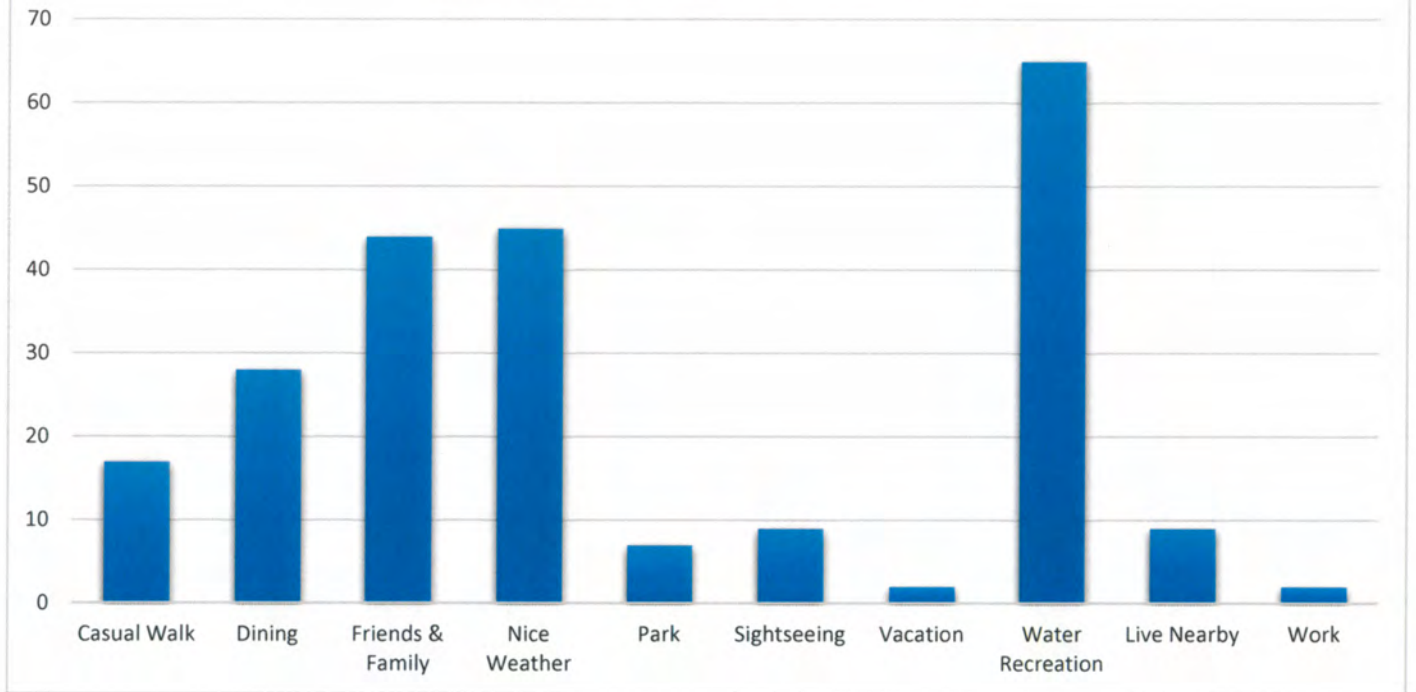


PEDESTRIAN COUNT



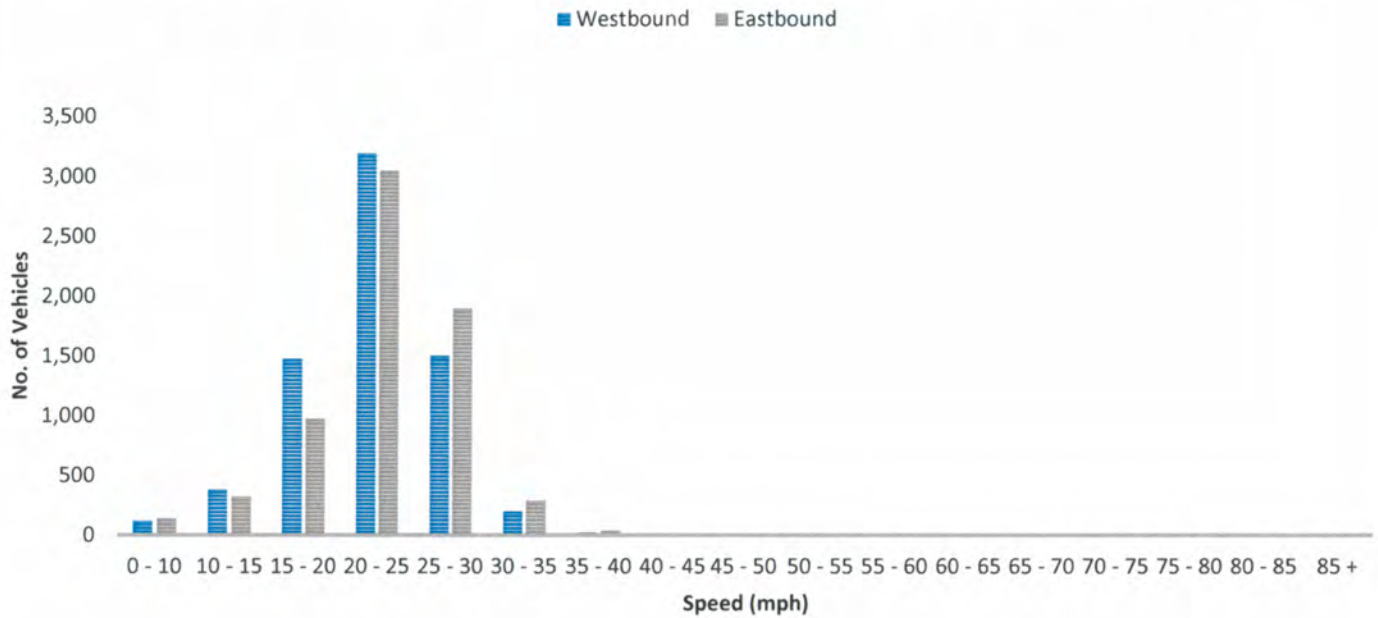
FIELD SURVEY

Field Survey:
What Brings you to Redondo Today?



SPEED STUDY - SITE 1

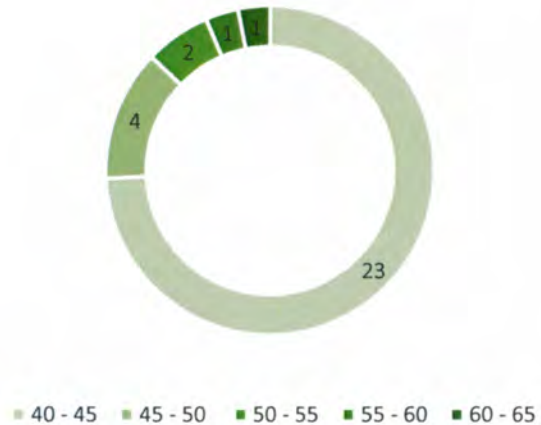
REDONDO WAY S - EAST OF SOUND VIEW DRIVE



Total Study Percentile Speed Summary			
Westbound			
50th Percentile (Median)	22.4	mph	
85th Percentile	26.2	mph	
95th Percentile	28.9	mph	
Eastbound			
50th Percentile (Median)	23.3	mph	
85th Percentile	27.3	mph	
95th Percentile	30.0	mph	

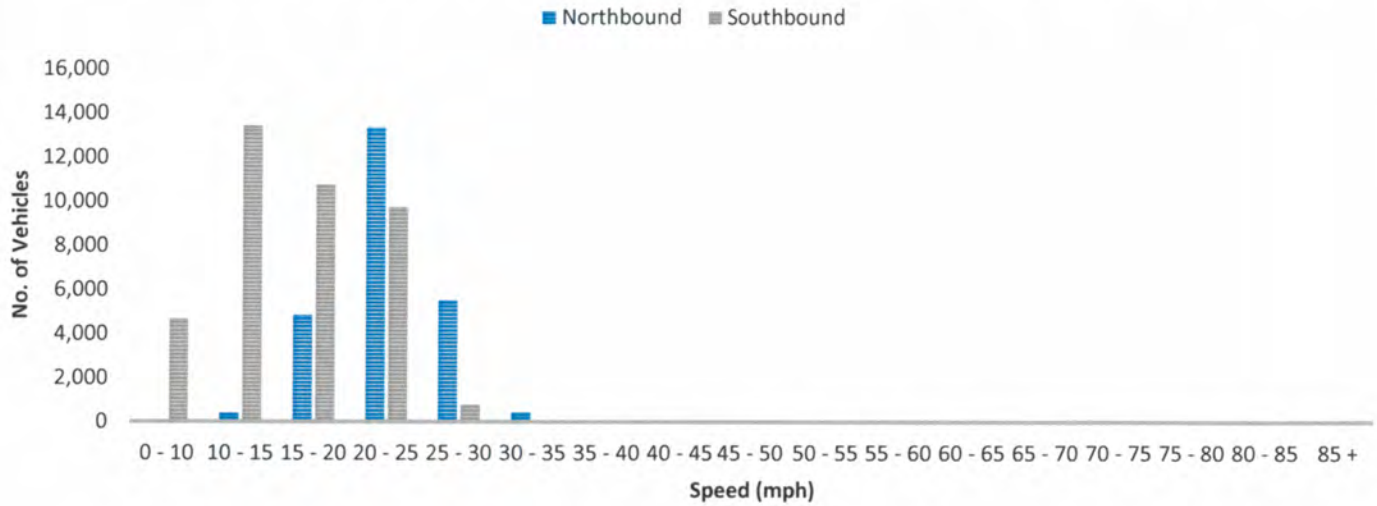
Total Study Speed Statistics			
Westbound			
Mean (Average) Speed	22.0	mph	
10 mph Pace	17.4 - 27.4	mph	
Percent in Pace	76.3	%	
Eastbound			
Mean (Average) Speed	23.0	mph	
10 mph Pace	18.6 - 28.6	mph	
Percent in Pace	76.7	%	

Vehicles traveling over 40 mph



SPEED STUDY - SITE 2

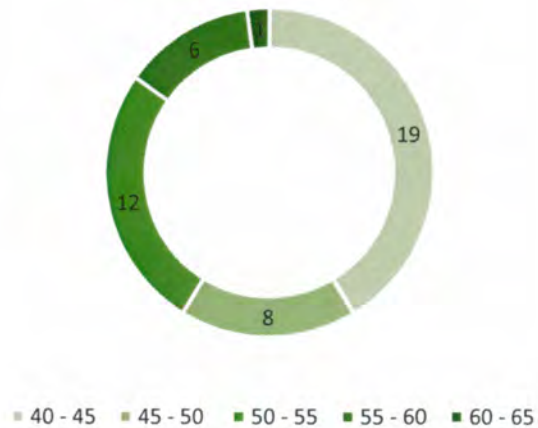
REDONDO BEACH S, NORTH OF 282ND STREET



Total Study Speed Statistics			
Northbound			
Mean (Average) Speed	22.7	mph	
10 mph Pace	17.7 - 27.7	mph	
Percent in Pace	84.9	%	
Southbound			
Mean (Average) Speed	16.0	mph	
10 mph Pace	11.4 - 21.4	mph	
Percent in Pace	65.5	%	

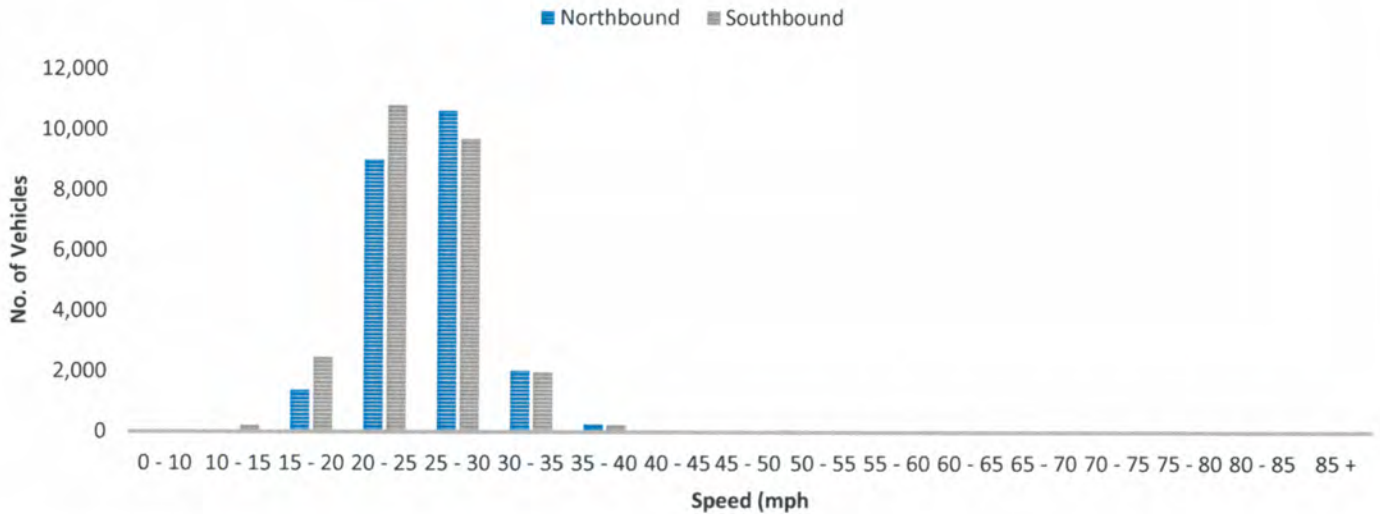
Total Study Percentile Speed Summary			
Northbound			
50th Percentile (Median)	22.6	mph	
85th Percentile	26.2	mph	
95th Percentile	28.2	mph	
Southbound			
50th Percentile (Median)	15.9	mph	
85th Percentile	21.7	mph	
95th Percentile	23.7	mph	

Vehicles traveling over 40 mph



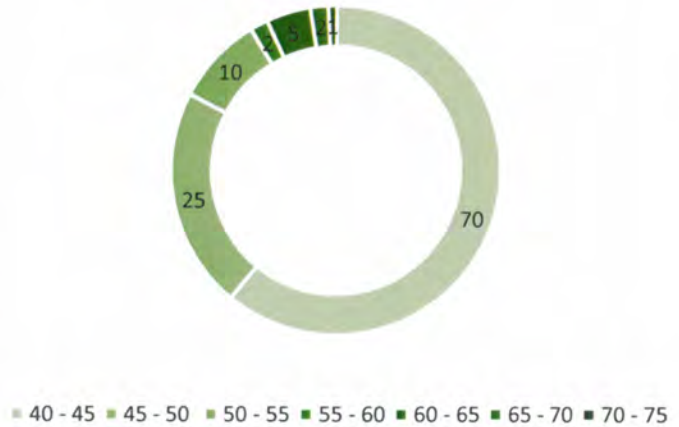
SPEED STUDY - SITE 3

REDONDO BEACH S, NORTH OF 287TH STREET



Total Study Percentile Speed Summary			
Northbound			
50th Percentile (Median)	25.3	mph	
85th Percentile	28.9	mph	
95th Percentile	31.5	mph	
Southbound			
50th Percentile (Median)	24.6	mph	
85th Percentile	28.6	mph	
95th Percentile	31.3	mph	
Total Study Speed Statistics			
Northbound			
Mean (Average) Speed	25.5	mph	
10 mph Pace	20.1 - 30.1	mph	
Percent in Pace	84.1	%	
Southbound			
Mean (Average) Speed	24.8	mph	
10 mph Pace	19.5 - 29.5	mph	
Percent in Pace	81.0	%	

Vehicles traveling over 40 mph



INTERSECTION CAPACITY

Weekday

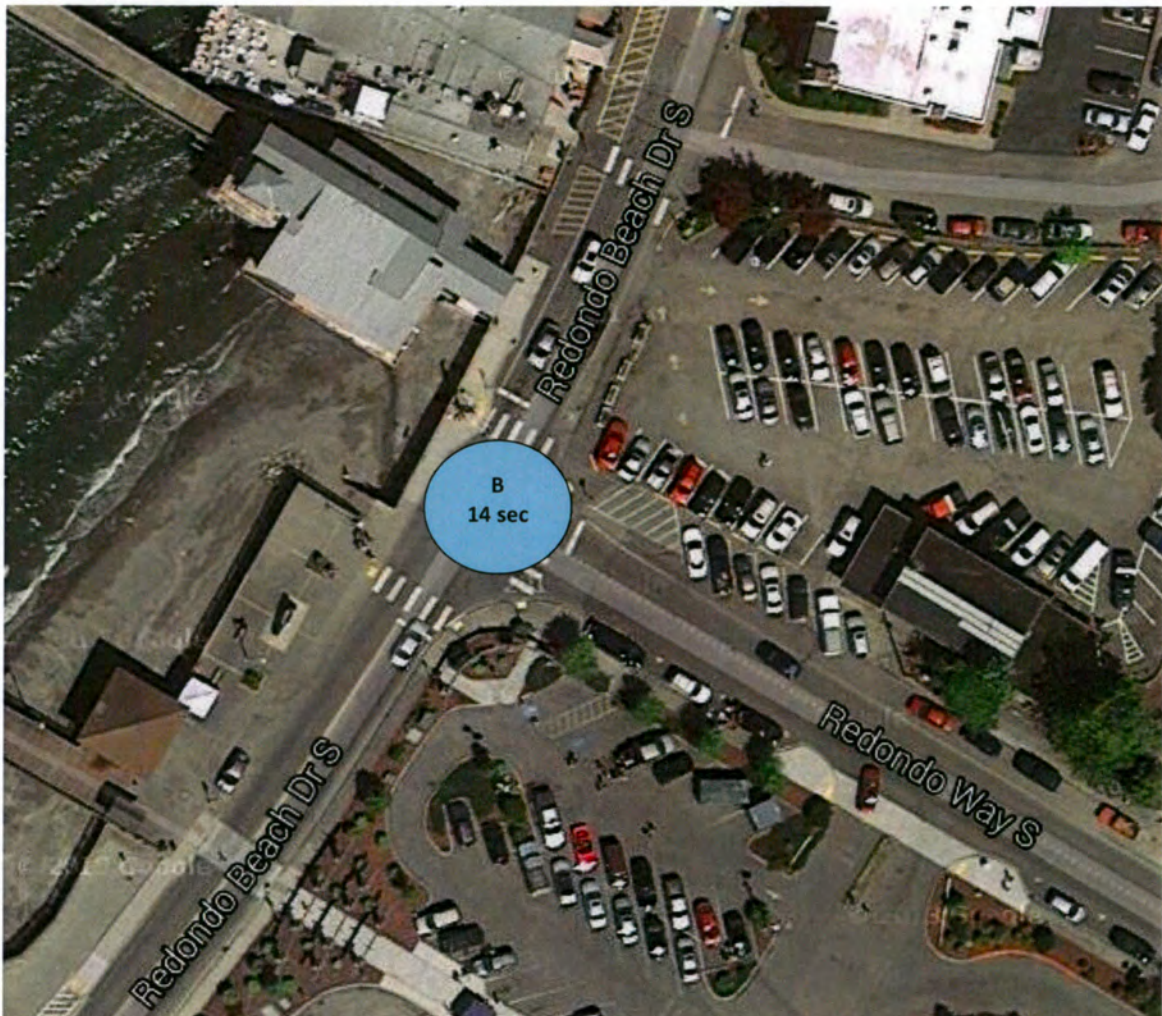
2014 LOS and Delay - Weekday

Delay

Westbound	9 seconds
Northbound	10 seconds
Southbound	16 seconds
Total Intersection	14 seconds

LOS

Westbound	A
Northbound	A
Southbound	C
Total Intersection	B

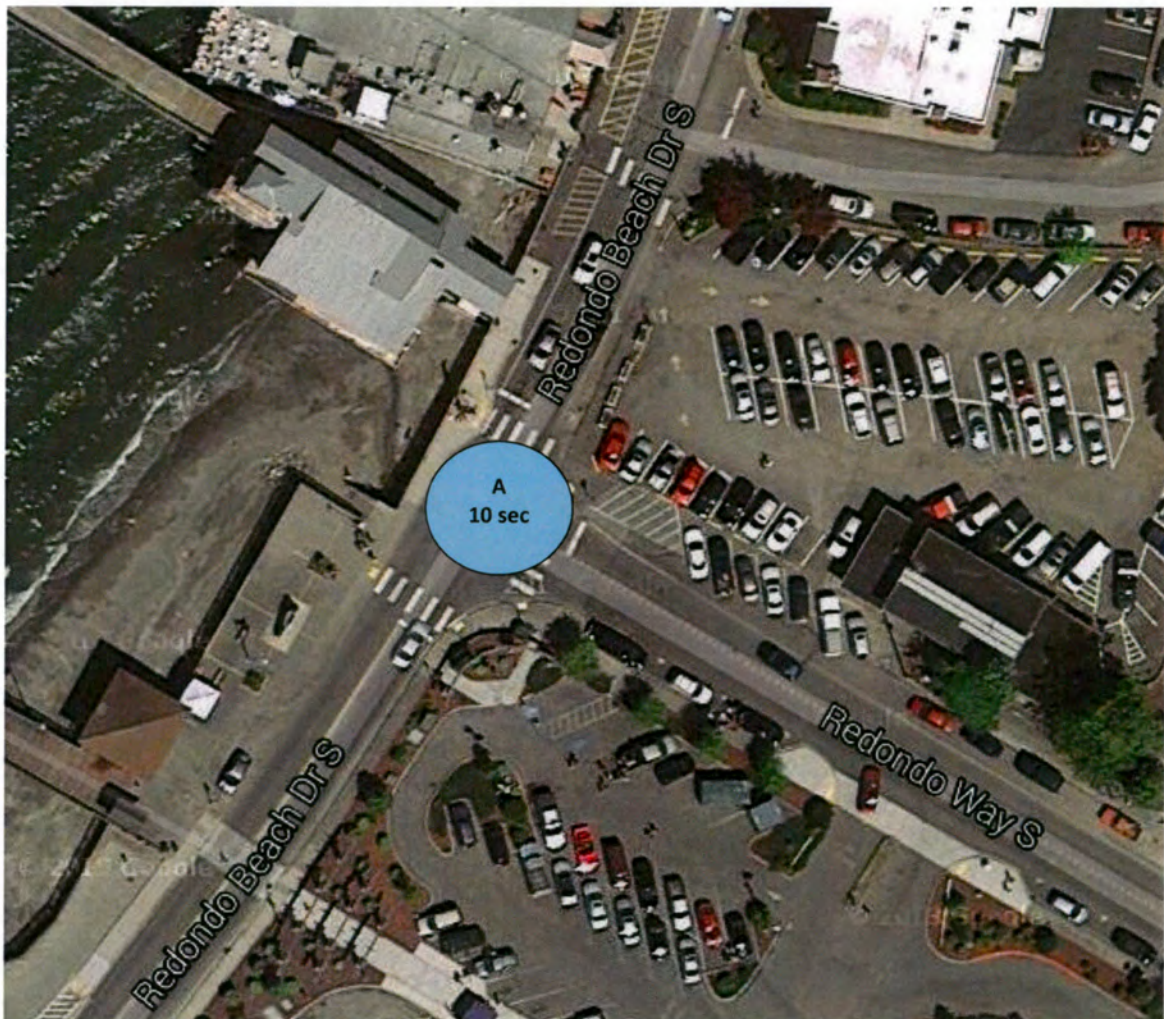


2014 LOS and Delay - Weekend**Delay**

Westbound	9 seconds
Northbound	9 seconds
Southbound	11 seconds
Total Intersection	10 seconds

LOS

Westbound	A
Northbound	A
Southbound	B
Total Intersection	A



Appendix B

Comments from Open House



City of Des Moines
Redondo Parking Management Plan
Comments from Public Meeting - October 15, 2014

Comment #	Comment	Location	Parking	Crime	Sidewalks	Lighting	Traffic Control	Speed	Crosswalks	Boat Launch	Sight Distance	Street	Blocked Driveway/Mailbox/Property	Signage	Other
1	Low planters to force pedestrians to crosswalks.	Redondo Beach S & Redondo Way S							X						
2	Street is in disrepair and needs to be resurfaced.	Sound View Dr S/south of 287th St										X			X
2	Too many cars driving back and forth not knowing if it is a dead-end street heading south on Sound View Drive.	Sound View Dr S/south of 287th St													
2	Too many cars, especially when weather is good, looking to park in our driveways.	Sound View Dr S/south of 287th St	X										X		
2	We have way too many heavy trucks going back and forth to the Lakehaven Sewer Facility causing continuous damage to our asphalt. Not only does it look terrible, it is very dangerous to walk on--someone is going to fall down and sue the City.	Sound View Dr S/south of 287th St										X			X
3	Unable to get out of driveway due to being blocked--no response from City.	South of 287th St/between Sound View Dr & Redondo Beach S	X										X		
4	Traffic light with speed pillows to control speed on Redondo Beach and increase traffic flow during high-travel times	Redondo Beach S & Redondo Way S					X	X				X			
5	Speeding, parking the wrong way, both sides of the street, in front of our house, blocking the front of our house. The worst between May through September. Our address: 421 S 284th Mail delivery person will not deliver mail if boxes are blocked, which is often. We can't come out of our driveway when boat trailers are parked there.	Sound View Dr S & 284th St (421 S 284th)	X					X					X		
6	Nobody uses stop sign.	6th Place S & Sound View Dr S					X							X	
7	Cannot see at stop sign to turn.	287th St & Redondo Beach S									X			X	
8	Can't see stop sign, parking too close, going up hill parking, too narrow--_____ of parking.	287th St & Redondo Beach S	X								X			X	
9	Site for egress from driveway is extremely limited and traffic is fast with multiple cars parked on the side of the already narrow road.	Sound View Dr S/south of 5th Place S	X					X			X				
10	Needs lights--crime, drugs, and prostitution (condoms, needles).	5th Place S & 6th Place S (off of Sound View Dr S)		X		X									
11	Kids hang out here at night--loud music, need police presence.	Sound View Dr S from 284th St to Redondo Way S		X											
12	This will solve the traffic back up from Salty's and back up the hill (1/2 mile or more) when the sun is out: Place a sensor around the corner of 281st to turn on a crosswalk (wait/walk) to allow cars to clear. No light/crosswalk except when "busy." (Rush hour when sun is out.)	Crosswalks on Redondo Beach S from N corner of Bayshore Condos to 281st St					X		X						
(12 & 31)	Cameras and smart crosswalk at Redondo Beach and Redondo Way with monitors to control pedestrian traffic and auto traffic flow during 4-6:30 p.m. (high-volume times).	Crosswalks on Redondo Beach S from N corner of Bayshore Condos to 281st St					X		X						
12	Too many crosswalks.	Crosswalks on Redondo Beach S from N corner of Bayshore Condos to 281st St							X						
13	Widen and angle parking.	282nd Street	X									X			
14	Concerned about drug activity along unlighted section of 6th Place S just past junction (Y) with Sound View Drive. Constant drug dealing and consumption taking place. Need better lighting, patrolling, and/or parking restrictions.	6th Place S from 5th Place S to Sound View Dr S	X	X		X									
14	Can we use this for parking?	6th Place S from 5th Place S to Sound View Dr S	X												
15	If people park here, access to mailboxes is blocked. No mail delivery.	West side of Sound View Dr S just south of 5th Place S	X										X		
15	If on-street parking goes to pay-only, this road will absorb the parking issues.	West side of Sound View Dr S just south of 5th Place S	X										X		
15	If people park here, the view of oncoming traffic is blocked, which poses a serious risk for accidents especially since many drivers speed on Sound View Drive S. This has been an issue in the past.	West side of Sound View Dr S just south of 5th Place S	X					X			X				
16	Needs streetlights.	10th Avenue - 281st Street - Redondo Beach				X									
16	Needs sidewalks.	10th Avenue - 281st Street - Redondo Beach			X										
16	Speeding.	10th Avenue - 281st Street - Redondo Beach						X							
16	Traffic queues on sunny days--on holidays, too.	10th Avenue - 281st Street - Redondo Beach					X								
16	Taking life into your hands walking dog @ 4 p.m., plus people park (have to walk in street)	10th Avenue - 281st Street - Redondo Beach	X		X										
17	Needs a light or eliminate (crosswalk?).	Redondo Beach S & 282nd St					X		X						
18	Make lot free to cars, so overflow does not reach streets.	SE corner of Redondo Beach S & Redondo Way S	X										X		
18	Make less boat spaces.		X												

City of Des Moines
Redondo Parking Management Plan
Comments from Public Meeting - October 15, 2014

Comment #	Comment	Location	Parking	Crime	Sidewalks	Lighting	Traffic Control	Speed	Crosswalks	Boat Launch	Sight Distance	Street	Blocked Driveway/Mailbox/Property	Signage	Other
19	Opposed to pay-parking on roads. Many families (under privileged/low income) use the park and adjacent areas. Charging will push these to other neighborhoods adjacent, simply moving the problem. Capacity is currently under-utilized.	Bayshore Condos (representing 5 people)	X												
19	Remove pay at lot? Free parking 5-10 p.m.?	Bayshore Condos (representing 5 people)	X												
19	Speed bumps along Redondo Beach Drive toward 1st from Salty's could improve pedestrian safety. The metal rail divider is helpful, but cars drive 25+ to 35+ regularly and they are only steps away from young children and pets. Perhaps lowering speed to 20 mph could slow down traffic?	Bayshore Condos (representing 5 people)						X							
19	Opposed to reducing park size and adding parking. More parking will only bring more visitors and push the problem along. People need parks for recreation. This isn't a capacity problem (per your stats), but an underused parking lot.	Bayshore Condos (representing 5 people)	X												
20	Use it as a U-turn--hits my mailbox.	Sound View Dr S at 6th Place S & 284th St										X			
21	Speed camera that send tickets.	Redondo Beach S from crosswalk north of 287th St for 100 yds(?)						X							
22	Speed camera that send tickets.	Redondo Way S - 100 yds(?) east of Sound View Dr S						X							
22	Parking (angle) along Redondo Way on each side of road east of condo parking lot with new culverts, meters, and lighting.	Redondo Way S - 100 yds(?) east of Sound View Dr S	X			X						X			
23	Increase visibility/need a light.	North leg of 281st St & Redondo Beach S				X					X				
23	Need crosswalk--ADA issues.								X						
24	Speeding issue occurs further south than data collection point.	Crosswalk area on Redondo Beach S south of 287th St						X							
25	"Stop for Pedestrians--It's the Law" signs.	3 crosswalks on Redondo Beach S--north, south, & at 287th St							X					X	
28	Small architecturally appealing neighborhood watch lighthouse for Redondo Neighborhood Watch with spotlight to defer Redondo Way music/car partying with coffee stand below.	Redondo Beach S at Fishing Pier(?)		X											X
29	New parking and lighting off 6th triangle, cut out hillside and widen road to support paid parking.	6th Place S between 5th Place S & Sound View Dr S	X			X									
29	High-crime area (24/7), drugs here, but it's all bad at night.	6th Place S between 5th Place S & Sound View Dr S		X											
29	High-crime area needs lights.	6th Place S between 5th Place S & Sound View Dr S		X		X									
30	City liability that needs fixing--no signs for "Children at Play" on any roads	Redondo Park--at end of east road												X	
31 (& 12)	Cameras and smart crosswalk at Redondo Beach and Redondo Way with monitors to control pedestrian traffic and auto traffic flow during 4-6:30 p.m. (high-volume times).	Redondo Beach S & Redondo Way S							X						
36	Exit out of Bayshore Condos often semi-blocked by parked cars.	Sound View Dr S between 283rd & 284th Streets	X										X		
37	Boat and trailer parked in street past 2 years!	8th Avenue S	X												
38	Speeding on Sound View Drive is common everyday.	Sound View Drive S						X							
39	Needs lighting.	6th Place (Avenue?) S between 5th Place S & Sound View Dr S				X									
39	Needs curbs in street so the cars with trailers don't park there.		X									X			
39	Don't want people parking in front of my house.		X										X		
39	Prostitution (condoms/underwear).			X											
39	Drugs (bags of heroin, LSD, needles, marijuana, meth log (?), alcohol bottles/cans.			X											
40	Noise and illegal activity on dock at night.	Fishing Pier(?)		X											
41	Marina question--Are bathrooms closed at night?	Fishing Pier(?)		X											
43	Restrict parking hours.	SE corner of Redondo Beach S & Redondo Way S	X												
44	No pay parking.	Sound View Dr S south of 287th St	X												
44	Residents shouldn't have to enforce residential parking permits.	Sound View Dr S south of 287th St	X												
44	Speed is an issue.	Sound View Dr S south of 287th St						X							
44	Pay for launch.	Sound View Dr S south of 287th St								X					
44	Parking problem is a 3-month issue. Little parking revenue will be generated during 9 months of the year.	Sound View Dr S south of 287th St	X												
44	Our issues are at night (crime).	Sound View Dr S south of 287th St		X											
50	Concerned about paid parking pushing cars into our residential area	Sound View Dr S north of 287th St	X										X		
General	Shoup (?) @ UCLA														
General	Paid Parking Studies--needs to be done right to succeed.		X												

City of Des Moines
Redondo Parking Management Plan
Comments from Public Meeting - October 15, 2014

Comment #	Comment	Location	Parking	Crime	Sidewalks	Lighting	Traffic Control	Speed	Crosswalks	Boat Launch	Sight Distance	Street	Blocked Driveway/Mailbox/Property	Signage	Other
General	Residents have had blocked driveways this summer from people walking the boardwalk. The police have been called and we were told that it's not an emergency, so there is nothing we can do.		X										X		
General	Also, much drug use on north end of Sound View Drive. The police either don't care or don't want to deal with it.	Sound View Dr S - north end		X											
General	People park on S 287th and block our driveway.	S 287th St	X										X		
General	Curfew for boardwalk.	Boardwalk		X											
General	Open parking lot to time-of-day restrictions in established parking and on street		X												
General	Boat trailers block road—narrow (opening?)		X										X		
General	I'm concerned about where the "visitors" to our waterfront are coming from. Your stats suggest the bulk of visitors come from the 272nd area. This population is more of a "rental" frame of mind. What I mean is, they come down to our beach/park and use it, then don't pick up after themselves. They push that on us property owners who care enough to pick up the garbage and the Des Moines parks people. I'm curious to know how we can promote/support more responsible care of our area. I really don't mind the visitors to our beautiful area, but it'd be real nice if they'd clean up and respect the grounds/environment.														X
Email	Could the roads coming down from dash point onto redondo beach drive which becomes 16th prohibit trucks? that in itself could help. large trucks going north on redondo beach drive and up 272nd have to go over into oncoming traffic just to make the turn! there are many more trucks than the ones just going to saltys which is the only business down here. just for consideration.	Redondo Beach Drive/16th													X
Email	I am wondering if there was a possibility to restrict the use of the road for trucks? many many more trucks use the road than are going to saltys— and at the corner of redondo beach drive going north where it turns into 272nd, the trucks have to make a wide turn into oncoming traffic to turn to go up the hill! so obviously it is not a road built for these trucks! we are thinking that if the road could be reclassified to exclude trucks by weight or whatever—that would help with some of the traffic. regarding the other traffic, a light may help, as i think most of the traffic is coming this way to avoid other traffic lights they would have to use if they stayed on the main roads to the freeway or 99. this would also help residents in the area because there would be a light to come out of our secondary drives to get out onto redondo beach drive. the third thought is speed bumps? there are a lot of families and walkers, and the speeders are frequently out of control. could there be another crosswalk at the juncture/turn of redondo beach drive and 272nd? or a four way stop there would be wonderful—so the speeders dont take that blind turn at high speed?	Redondo Beach Drive/272nd					X	X	X						X
Email	Implement lane delineation to prevent passing on Redondo Beach Drive and Redondo Way	Redondo Beach Drive & Redondo Way													X
Email	Lower speed limit or limit users of the area to Des Moines Residents							X							X
Total Comments by Category:			33	13	2	8	7	13	9	1	5	7	12	5	8

#1 low plantings to Fore. feeds to crosswalks

#2 STREET IS IN DISREPAIR
AND NEEDS TO BE RESURFACED

TOO MANY CARS DRIVING BACK
AND FORTH NOT KNOWING IT
IS A DEAD END STREET MEANING
SOUTH ON SOUND VIEW DRIVE

AND, TOO MANY CARS, ESPECIALLY
WHEN WEATHER IS GOOD, LOOKING
TO PARK IN OUR DRIVEWAYS

WE HAVE WAY TO MANY HEAVY
TRUCKS GOING BACK AND FORTH
TO THE LAKEHAVEN SEWER
FACILITY CAUSING CONTINUOUS
DAMAGE TO OUR ASPHALT

NOT ONLY DOES IT LOOK TERRIBLE,
IT IS VERY DANGEROUS TO
WALK ON - SOMEONE IS GOING TO
FALL DOWN AND SUE THE CITY

#5-

Speeding, parking, the wrong way, both sides of the street, in front of our house, blocking the front of our house. The worst between May - through September. Our address: 421 S. 284th. Mail delivery ~~person~~ will not deliver mail if boxes are blocked, which is often.

We can't come out of our driveway when boat trailers are parked there.

Billy Joe Linder

#9 SITE FOR EGRESS FROM
DRIVEWAY IS EXTREMELY LIMITED
AND TRAFFIC IS FAST WITH MULTIPLE
CARS PARKED ON THE SIDE OF THE
ALREADY NARROW ROAD.

#12 This will solve the traffic
Back up from Salty's & Back up
the Hill (1/2 mile or more) when
the Sun is out.

Place a sensor around the
corner on 281st to turn on
a cross walk wait/walk
to allow cars to clear.

NO Light/cross walk accept
when "Busy". (Rush Hr when Sun is
out).

Sun Wannen

St
12

- CAMERAS AND SMART CROSSWALK
at Redondo Beach and Redondo Way
with Monitors to Control Pedestrian
TRAFFIC and Auto TRAFFIC Flow
during 4-6:30 high volume times

Sticker number 14

Concerned about drug activity along unlighted section of 6th P/S just past junction (Y) with Sound View Drive. Constant drug dealing and consumption taking place. Need better lighting, patrolling and/or parking restrictions.

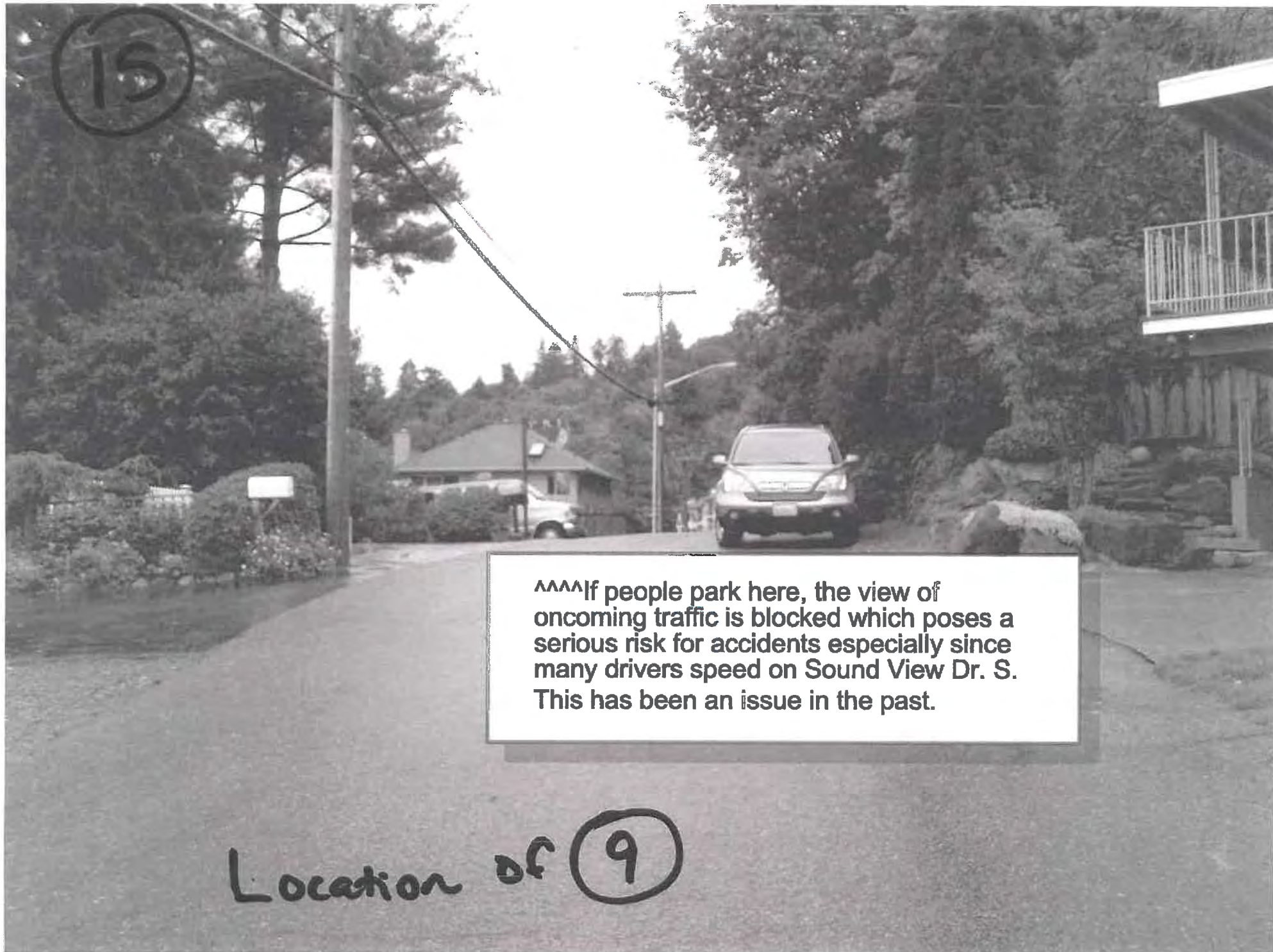
15

Blocking
MAIL



If people park here, access to
mailboxes is blocked. No mail
delivery. ----->

If on-street parking goes to pay-only
This road will absorb the parking
issues.



15

^^^^If people park here, the view of oncoming traffic is blocked which poses a serious risk for accidents especially since many drivers speed on Sound View Dr. S. This has been an issue in the past.

Location of 9

- Opposed to pay parking on roads. Many families (under privilege / low income) use the park and adjacent areas. Charging will push these to other neighborhoods adjacent, simply moving the problem. Capacity is currently underutilized.
- Remove pay @ lot? Free Pkg 5-10 PM?
- Speed bumps along Redondo Beach Drive toward 1st from Sally's could improve pedestrian safety. The metal rail divider is helpful, but cars drive 25+ - 35+ regularly and they are only steps away from young children + pets. Perhaps lowering speed to 20MPH could slow down traffic?
- Opposed to reducing park size and adding parking. More parking will only bring more residents visitors and push the problem along. People need parks for recreation. This isn't a capacity problem (per your stats), but an underused parking lot.

①

Sharon Castello

28303 Sandview Dr. S. #302

Des Moines, WA 98198

206-819-6243

②

Orrin Maly #210

206-244-3482

Redondo Beach Condo Assn.

*** Thanks to the City for doing this study and collecting input. We appreciate the things you have done recently →

19 continued

Thank you for -

- lighting on Sandview -
- 3 way Stop
- no parking on West side Sandview Dr.
and others.

(22)

- PARKING (ANGLE) along Redondo Way on each side of road east of cargo parking lot with new culverts and motors. And lighting

#24 speeding issue occurs further south
than data collection point

#25 'stop for pods, its below' signs

1 ~~27~~ 29

New Parking & Lighting off 6th triangle,
cut out hillside and wider road to
support paid parking

28

• ~~The~~ Small. ARCHITECTURALLY Appealling
Neighborhood watch light-house for
Redondo Neighborhood watch with
spotlight to deter Redondo Way
Music / CAR PARTYING - ~~with~~ with
coffee stand below

30

• City Liability That needs fixing
- NO SIGNS FOR CHILDREN AT
PLAY ON ANY ROADS

31
12

• CAMERAS AND SMART CROSSWALKS
at Redondo Beach and Redondo Way
with Monitors to Control Pedestrian
TRAFFIC and Auto TRAFFIC Flow
during 4-6:30 high volume times

44

- ① No pay parking
- ② Residents shouldn't have to enforce residential parking permits.
- ③ Speed is an issue
- ④ pay for lunch.
- ⑤ Parking problem is 3 month issue.
Little parking revenue will be generated during 9 mo. of year.
- ⑥ Our issues are at night (crime)

Shoup c. UCLA

Paul Fasting Studies - needs to be
done right to succeed

RESIDENTS HAVE HAD
BLOCKED DRIVEWAYS THIS
SUMMER FROM PEOPLE
WALKING THE BOARDWALK, THE
POLICE HAVE BEEN CALLED
AND WE WERE TOLD THAT
ITS NOT AN EMERGENCY SO
THERE IS NOTHING WE CAN DO.

ALSO MUCH DRUG USE ON
NORTH END OF SOUNDVIEW DR
THE POLICE EITHER DONT CARE
OR DONT WANT TO DEAL WITH.

I'm concerned about where the "visitors" to our waterfront are coming from. Your stats suggest the bulk of visitors come from the 272nd area. This population is more of a "rental" frame of mind.

What I mean is they come down to our beach/park and use it then don't pick up after themselves. They push that on us property owners who care enough to pick up the garbage and the D.M.-park's people. →

I'm curious to know how
we can ^{promote} support more responsible
care of our area. I really
don't mind the visitors to
our beautiful area but
it'd be real nice if they'd
clean up and respect
the grounds/environment

Sincerely,
Natalie Turner
283 376 4325
28128 9th Pl S.

REDONDO PARKING MANAGEMENT PLAN

Thank you for attending tonight! Please provide your e-mail to receive notice about project updates.



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REDONDO BEACH

REDONDO PARKING MANAGEMENT PLAN

Thank you for attending tonight! Please provide your e-mail to receive notice about project updates.



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Julie Calvin 28840 6th Pl S. " "

Charles Calvin " " " " "

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Des Moines



REDONDO BEACH

REDONDO PARKING MANAGEMENT PLAN

Thank you for attending tonight! Please provide your e-mail to receive notice about project updates.



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REDONDO PARKING MANAGEMENT PLAN

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Nadine Haff 28701 6th Pl. S. 1210

Dick Haff "



REDONDO BEACH

REDONDO PARKING MANAGEMENT PLAN

Thank you for attending tonight! Please provide your e-mail to receive notice about project updates.



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Bobbie Hammond	27727 10th Ave S.	bobbie.hammond@comcast.net



REDONDO BEACH

Speed Bumps on Redondo Beach & 281st/Re
Flashing Beacons for Peds (in road as well)
Landscaping
Visibility coming down 287th
Police Presence
6th Ave (Lighting)
Opposed to converting Park ~~to~~ Parking lot ✓
City to Purchase Vacant Seely's building
Bus Shuttle from P&R
Diagonal Parking along Redondo Beach
Opposed to parking meters.
Camera Presence to deter illegal Dumping
Traffic Signal on Redondo Ave/Redondo Beach
Reduce Speed Limit & Add Speed Cameras
Channel Pedestrians to specific crosswalk
No Parking within 30'
Ordinance Signs
Special Lighting only on Boardwalk

Others

- Pedestrian control, causes ~~to~~ car traffic improve traffic during peak times (weekends/sunny days)
- Improved Landscaping around Parking Lot near boats (M.P.)
- Low Lights for Boardwalk
- Street Light on crosswalk to Salty's from Parking Lot
- Also on 281st & Redondo Beach Dr

MAPPING

STATION

4

#1
Also Home for
Classics

*3 unable to
get out of drive
due to being blocked
No Response from car
Drop speed limit to
15 mph with speed
limiters - Trucks

4 - Traffic Light
with speed cameras
to capture speed
on Redondo Beach
5 - Increase traffic
flow during peak
travel times +1

6 -
NOBUMP
USE STOP
SIGN

7 -
Cannot see
at stop sign
to turn +1

Needs
LIGHTS
CENNE DRUG
+ Prostitution
(condoms
needles)

Can't see stop
sign, parking
too close,
going up hill
parking too
narrow - 1/2

11 Kids hang out here
at night - loud
music, need
police presence

12
Too many
crosswalks
+1
+1

13
Wider angle
parking

14
Can we use this
for parking?

16
Needs lights
+ needs sidewalks
+ needs
speeding
+ traffic grows
on sunny days
15 - on holdstop
too
taking lifelines
your hands
walking dog
@ 4am
(then people park
there to walk, in school)

17
Needs a
lighting
or eliminate.

18 make lot
for car so
overflow does
not reach
streets + less
roads spaces.

20
Use it as a
U-Turn
hits my
mail box

21 22
Speed Camera
that sends
tickets.

23 increase
visibility/
need a light
NEED XWALK
ADA ISSUES

24 High crime
area 24-7
area, bad cts
all bad at night
need more police
presence



REDONDO BEACH

MAPPING

STATION

4

#36
Part out of
daytime condos
often blocked by
parked cars

#37
Beach trailer
parked on street
past 2 years

#38
SPEEDING ON
SUNSHINE BLVD
IS COMMON BEHIND
THE

#39
Road lighting
needs to be on street
or on side with traffic
light pole

#40
Need more
lighting in front of
house

#41
Prostitution/
Tenderloin/
Drug House, LSD
Nikki, Marijuana
Alcohol Bikes/Car

NEEDS LIGHTING

#42

#43
ILLEGAL
ACTIVITY ON
DASH AT NIGHT

#44
Homes
are businesses
closed at night

#45

RESIDENT
PARKING HOUSES

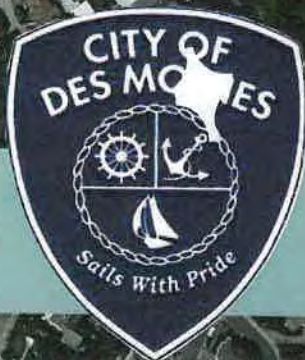
#50
Concern
about paid parking
pushing cars in
our residential area

People park
on S. 287th
block on
driveway

Open parking
lot to
Time of Day
Electrician
on 281st Street
Chapman Street

Curfew for
boardwalk

Boat trailers
block road -
N. 281st



REDONDO BEACH

Appendix C

List of Potential Solutions



Group 1 - Improve Activity Core					
	Issue				
Key Recommendations	Issue and Potential Solution	Pros	Cons	Feasibility	Cost
	Parking supply and design issues in Activity Core				
	Convert 6th Place S to a parking lot (between Sound View Drive and 5th Place S)	Increase parking supply.	Increased pedestrian activity through neighborhood, steep terrain, would require widening, need signs indicating primary beach access.		>\$500k with widening
TBD	Install angled parking along Redondo Way.	Increase parking supply.	Narrows travelled way	Existing widths not likely to allow for standard parking sizes (except 35 degree angled), so increase in parking stalls minimal.	\$150-500k
	Convert portion of park to parking area	Increase parking supply.	4f issue, likely would require environmental analysis.	Could add 14 stalls, but remove up to 9 unregulated stalls parked on Redondo Way & 282nd. Project would compliment Salty's parking lot restripe. Significant grading required.	\$400k-650K
X	Reallocate Marina parking from trailers to vehicles based on demand.	Flexible in application.	Requires managing and observing parking use.		<\$10k
	Traffic and pedestrian control near the Redondo Way/Beach Dr intersection				
	Rectangular Rapid Flashing Beacon at crossings	Warns vehicle of pedestrian conflicts (improve safety).	No reduction in vehicle delay.		\$35k-80k
	Landscape to force peds into crosswalk	Reduce pedestrian and vehicle conflict points (improve safety, reduce delay to traffic).	Longer trip for pedestrians crossing street (85 feet or 30 seconds) Fewer pedestrian access points to the boardwalk.	Costs contingent upon landscape type and possible widening requirements for ADA compliancy on sidewalks	\$50k-100k
X	Consolidate crosswalks	Reduce pedestrian and vehicle conflict points (improve safety, reduce delay to traffic).	Longer trip for pedestrians crossing street (85 feet or 30 seconds). Fewer pedestrian access points to the boardwalk. May result in pedestrians crossing midblock (uncontrolled).		\$10k-100k (pavement removal)
X	Raised/Decorative intersection	Highlights the "heart" of the area, slows traffic	High expense		\$500k-800k
X	Install traffic light	Improve safety if warranted. Reduce delay potentially if warranted.	Vehicles will run a stop light as well, if volumes do not warrant the signal.		\$300k-350k
	Increased signs indicating stop sign ahead	Improve safety and stop sign effectiveness.	Increased signs may be visual impact.		<\$10k
	Travel between and access to Salty's lot and restaurant				
X	Reconfigure Salty's lot & pedestrian access to redirect to a centralized location.	Reduce pedestrian and vehicle conflict points (improve safety, potentially reduce delay to traffic).	Longer trip for pedestrians crossing street (85 feet or 30 seconds). Fewer pedestrian access points to the boardwalk. May result in pedestrians crossing midblock (uncontrolled).		\$400k (sidewalks & restripe) - \$1M (repaving)
	Speeding traffic ^a				
	Speed hump/cushion/or table	Reduce speed. Typical by 20%.	Increased signs may be visual impact. Potential increase noise.		\$5k-\$20k
	Choker or other lateral restriction of travel way	Reduce speed. Reduce crossing distance if implemented at ped crossing.	Increased signs may be visual impact.	Not recommended as speeding occurs at night. Potential increase in collision severity.	\$5k-\$20k
	Speed cameras	Reduce speed.		High rate of effectiveness if associated with a ticket.	\$10k-\$30k
(See ped above)	Speed activated warning sign	10% reduction in typical speeds.			\$20k-50k
	Textured pavement at central locations	5% reduction in typical speeds. Highlights pedestrian activity areas to drivers.	Potential increase noise.		\$40k-80k
	Converging chevron marking pattern or other roadway pavement markings	5% reduction in typical speeds	Maintenance cost. Increased signs may be visual impact.		\$<10k
	Safety				
	Close the 6th Place South roadway area	Reduces mischevious behavior.	People may continue to congregate if the roadway or a clearing still exists. Leaves only 1 access point to a number homes, emergency response issue?		TBD
	Redevelop the 6th Place South roadway area (increase open space)	Reduces mischevious behavior.	Development other than residential could increase activity in neighborhood	Property north of roadway zoned single-family. Two lots, privately owned (same owner).	>\$500k with widening
X	Improve lighting	Typically reduces mischevious behavior.	May be visual impact to residences.	Conduct lighting study to determine feasibility.	\$5k-\$20k each
X	"Stop for pedestrians - It's the law" signs along Redondo Beach South at crosswalks	Highlights pedestrian activity areas to drivers.	Increased signs may be visual impact.		\$<10k
X	"Children at Play" signs near park	Highlights pedestrian activity areas to drivers.	Increased signs may be visual impact.		\$<10k

Group 2 - Improve Conditions in Residential Neighborhoods					
Key Recommendations	Issue and Potential Solution	Pros	Cons	Feasibility	Cost
	Parking issues (parking blocks driveways, mailboxes, and residential parking)				
	Parking delineation	Reduce conflict between on street parking and parking on residential property.	Residential use may conflict with or extend into City ROW. Example: Gravel parking strip on the edge of a property.	Cost depends greatly on scale & type of improvements. If curbing & paving is included, costs will be high	\$100k - >\$1M
X	Install consolidated lockbox mailboxes	Reduces conflict between parked vehicles (residential or public) and mailboxes.	Distance to boxes may increase (or decrease), but less than a block.	1.2+k/8 door box plain.	<\$10k
	Remove pay requirement at Marina lot	Increase utilization of the parking lot.	May not eliminate neighborhood parking issue as lot is located at north end of boardwalk and beach access. Reduced revenue for Marina, which is necessary for boatlaunch and facilities maintenance.	Revenue loss - 100k/year? Increases free parking by x stalls.	<\$10k
	Create free parking times at Marina lot	Increase utilization of the parking lot. Flexible in use.	May not eliminate neighborhood parking issue as lot is located at north end of boardwalk and beach access. Reduced revenue for Marina.		<\$10k
TBD	Implement metered parking in Activity Core	Increased revenue.	Increased parking in neighborhoods. Expensive to implement and maintain.		High
	Implement permit parking only.	Reduce public parking in neighborhood.	Would require enforcement.		Mid
X	Hotline to report parking violations.				
X	Setup ordinance (if not in place) to allow for tow.				
X	Marina/street parking attendance allowed to ticket violators.				
X	Install "do not block driveway" signs.				
	Use of residential streets				
	Install Local Access only signs	Reduce cut-through traffic on residential streets.	Increased signs may be visual impact.		<\$10k
	Improve way-finding - delineate neighborhood from activity core (Increased signs).	Reduce cut-through traffic and other activity on residential streets.	Increased signs may be visual impact.		<\$10k
	Poor sight distance from driveway due to on-street parking				
X	Eliminate on-street parking adjacent to intersections or driveways by installing signs	Improve sight distance.	Increased signs may be visual impact.		<\$10k
	Poor sight distance (from 281st or 287th, turning on to Redondo Beach Drive S)				
X	Install no parking signs approaching the intersection	Improve sight distance.	Increased signs may be visual impact.		<\$10k
	Install no parking signs adjacent to residences	Reduce public use of parking on residential streets.	Reduce residential access to parking on residential streets.		<\$10k
	Poor lighting (general)				
	Property owners install lighting	Improved lighting, potential safety.	Increased lighting may be visual impact.		Low
	Other street light installations in dark areas, roadway bends, and pedestrian crossings	Improved lighting, potential safety.	Increased lighting may be visual impact.		\$5k-\$20k each

Appendix D

Parking Meter Analysis



APPENDIX D – REDONDO PARKING METER FEASIBILITY ANALYSIS

This document outlines a high level feasibility study of implementing paid parking along Sound View Drive, Redondo Way South, and along South 282nd Street. The study consists of review of the following:

- Meter Equipment Type
- Capital Costs
- Operations and Maintenance Costs
- Enforcement Options
- Estimated Annual Revenue
- Life-Cycle Cost Analysis

The analysis assumed the parking would be managed by pay stations or meters. There are approximately 89 existing spaces available along Sound View Drive, Redondo Way South, and South 282nd Street which could be included in the paid parking system. This analysis assumes that the program can be implemented separate from other projects listed under Section 6 of the Redondo Parking Management Plan, but flexible enough that it will also be compatible with the Section 6 projects as well.

NOTE: Installation of parking meters for on-street parking should only be implemented if the local residential areas are signed with “Residential Parking Only signs”. The impacts and parking violations to the local residential streets should be monitored to determine if non-compliance becomes an issue. If parking violations become a chronic issue along the residential streets, the City should then consider implementation of the Residential Parking Zone Program, to ensure the residential streets within the Redondo area do not experience an increase in parked vehicles. The Residential Parking Zone Program is described as Project 3 under Section 6 of the Redondo Parking Management Plan.

Meter Equipment Types Available

There are several options of available parking meter technology that were considered for implementation. Each of these types of meters is designed for specific situations and include:

- *Single-Space Meters*
Similar to conventional coin meters and would be located at every parking spot.
- *Dual-Head Meters*
Similar to single space meters but located between every other parking stall.
- *Multi-Space Pay-by-Space Meters*
One large meter serving up to 12 stalls, and each stall would have a designated stall number.
- *Multi-Space Pay-by-Display Meters*
One large meter serving up to 12 stalls, which would provide a paper receipt to be placed on the vehicle dash board.

Parking fees can be collected at these meters by using the traditional coin drop, credit/debit card, and even paid by cell phone, depending on the City’s preference.

Each equipment type has advantages and disadvantages. Single-space meters and dual-head meters would provide a convenient location for drivers to pay for parking, as the meters are located immediately near the vehicle. However, the purchase and installation of 89 single-space meters or 45 dual-head meters would result in significant cluttering of the areas around these parking stalls. In addition, the maintenance costs and revenue collection costs would be higher than multi-space meters as there are significantly more meters to collect revenue from. Also, the stalls along the streets would be required to be clearly defined, which makes single-space and dual-head meters incompatible with the existing conditions.

Multi-space meters reduce the number of meter stations on a block face. A multi-space meter system would provide a meter for up to 12 spaces (curbside parking) or service larger number of stalls in a parking lot. There are two primary systems: “pay-by-space” and “pay-by-display.” The pay-by-space meter has the user pay for a specific parking spot and requires clearly delineated parking spaces. The pay-by-display meter produces a sticker or receipt for the user to leave in their vehicle. This system does not require delineated parking spaces. The downside of the multi-space meters is that the driver must exit the vehicle and walk to the meter, which is a further distance. Moreover, the pay-by-display meters require the driver to return to their vehicle to leave the receipt on the dashboard, which can be perceived as an inconvenience.

Recommended Parking Meter Type

Because of the nature of the Redondo area, which consists of a mixture of parallel, angled, and non-delineated spaces, for this analysis it is recommended that multi-space pay-by-display meters be implemented. It is estimated that approximately ten meters would be necessary for the roadways along Sound View Drive, Redondo Way and South 282nd Street. Additional meters could be provided should Project 10 (Conversion of a Portion of Wooten Park to Angled Parking) be constructed, as defined in Section 6 of the Redondo Parking Management Plan. The benefit of the pay-by-display system is that it will work both with and without parking infrastructure improvements, detailed under other projects in Section 6 of the Redondo Parking Management Plan, because delineated spaces are not necessary.

Capital Cost

To understand the capital costs associated with implementation of a parking meter system, Michael Kavur of Global Parking Solutions USA and Patricia Love, the Community Development Director of the City of Mukilteo, were contacted. The City of Mukilteo recently approved to implement a pay-by-display parking system for their Lighthouse Park area. The Lighthouse Park is reminiscent of the Redondo area as it has a waterfront beach with boat launch, public park, local residential streets, and a restaurant nearby. As with Redondo, the Lighthouse Park is utilized by both out-of-town visitors and the local community. Lighthouse Park is also experiencing a parking capacity problem.

The City of Mukilteo has purchased 20 multi-space meters for approximately \$175,090, which includes equipment purchase, installation, setup, and training.

For the Redondo area, an estimated 10 multi-space meters are needed. The estimated capital costs are broken down in the table included with this analysis. The initial capital cost to purchase, deliver, and install the meters and associated equipment, plus setup and training, is anticipated to be approximately \$122,000. If Project 10 (Conversion of a Portion of Wooten Park to Angled Parking) is built, two additional meters would be installed, for an additional cost of approximately \$15,000.

Additional costs associated with developing delineated parking spaces, curb, and other infrastructure improvements are not included in this high-level analysis but are described under separate projects in Section 6 of the Redondo Parking Management Plan.

Operations and Maintenance Costs

The parking meters include a yearly service charge of \$13,200 for software management and reporting tools. In addition, costs of paper and extended warranty would cost approximately \$10,000 annually. Patricia Love indicated that the meters typically have a lifespan of 5 to 7 years, so upgrading of the meters (not pedestals) would be required approximately three times during the 20-year life cycle analysis.

Energy costs were not included with this analysis as the assumed metered parking systems are solar powered.

Enforcement Options

Currently, there is minimal enforcement in the existing parking area in Redondo. Installation of metered parking, as well as implementation of the Residential Permitting Zone, will increase the need for enforcement throughout the area, as patrons of the area may be more tempted to park on the residential streets to avoid the parking fees.

This analysis considers three options for enforcement:

- *Full-Time Enforcement*
A full-time staff person hired by the City to ticket parking violations.
- *Part-Time Enforcement*
Enforcement would be limited to weekends during the peak seasons. The enforcement would be contracted out to a private firm.
- *Without Formal Enforcement*
No formal enforcement would take place, similar to today

Full-Time Enforcement

The City of Mukilteo is hiring two parking rangers as part of their metered parking implementation at Lighthouse Park. The parking rangers will work full-time to enforce parking in the area. The costs for these rangers are approximately \$150,000 to \$200,000 per year, which includes salaries, equipment, and benefits. The City of Mukilteo mentioned these rangers would be present full-time during the day and evening, enforcing parking and patrolling the local neighborhoods, with the goal of providing a more positive community feel. The rangers would wear brown uniforms, similar to the rangers that are present in state and national parks.

For Redondo, one possible solution is for the City to hire one new staff person, in a similar way to the Mukilteo approach. This staff person would enforce parking and write citations for parking violators, as well as be a consistent presence throughout the area. The anticipated costs for this staff, including benefits and uniforms, could range from \$70,000 to \$100,000 per year. Please note that this staff person could also enforce parking in other areas, such as the Marina further north.

Part-Time Enforcement

The Cities of Bellevue and Redmond currently hire independent firms to provide enforcement of their on-street parking areas. To understand the cost of hiring a private firm to enforce during weekend peak seasons, Ken Kime, Regional Manager of Diamond Parking was contacted. He was quite familiar with the Redondo area and was able to provide an estimated (all-inclusive) cost of \$443 for an 8-hour period of enforcement. Assuming every Saturday and Sunday between April and September was identified as a peak day to enforce, this equates to 52 days or \$23,000 annually to enforce the area during peak weekends.

Without Formal Enforcement

A third option is not to increase formal parking enforcement of the area, similar to the situation today. Loss of revenue due to parking violations is highly speculative, but might result in up to a 15 percent loss in revenue, especially once the frequent users realize that there is no penalty associated with illegally parking. However, the larger issue could be the residual effect of an increase in parking violations along the residential streets which is likely to become a source of additional frustration for the local residents.

Estimated Annual Revenue

To estimate revenue, the following assumptions were made:

- Revenue was analyzed using \$1-, \$2-, and \$3-per-hour parking costs for the first year, with a 10% increase after every 5 years.
- Summer utilization was estimated based on the parking utilization count conducted for this study. The summer utilization (demand versus capacity) for the area was approximately 75 percent on Sunday and 50 percent on Tuesday. This utilization was used for the \$1-per-hour analysis, with slightly less utilization for the \$2- and \$3-per-hour analysis, assuming that with a higher parking cost some patrons may choose to not come to Redondo as they did in the past. The utilization reduction is highly subjective, therefore the estimates should be considered speculative in nature.
- It was assumed the off-peak months (non-summer months) would have a parking utilization of 25 percent of the peak-summer months for \$1-per-hour, and less for the \$2- and \$3-per-hour analysis. This value was estimated based on the Marina boat launch lot record of utilization by month.
- Assumed fees would be collected 8 hours per day and 7 days per week.
- Without enforcement, revenue was decreased by 25 percent, assuming that parking violations will increase. As with the utilization reduction, the decrease in revenue is highly subjective, therefore the estimates should be considered speculative in nature.
- The marina lot revenue of \$100,000 per year remains unchanged for the first five years, then a 10% increase after every 5 years based on input from the Marina.

Life-Cycle Cost Analysis

The anticipated expenditures and the \$1-, \$2-, and \$3-per-hour analysis were projected across a 20-year life cycle, using a 4-percent annual inflation factor. Other major factors affecting the cost include replacement of meter computers every 5 to 7 years and replacement of an enforcement vehicle every 7 years for the full-time enforcement option.

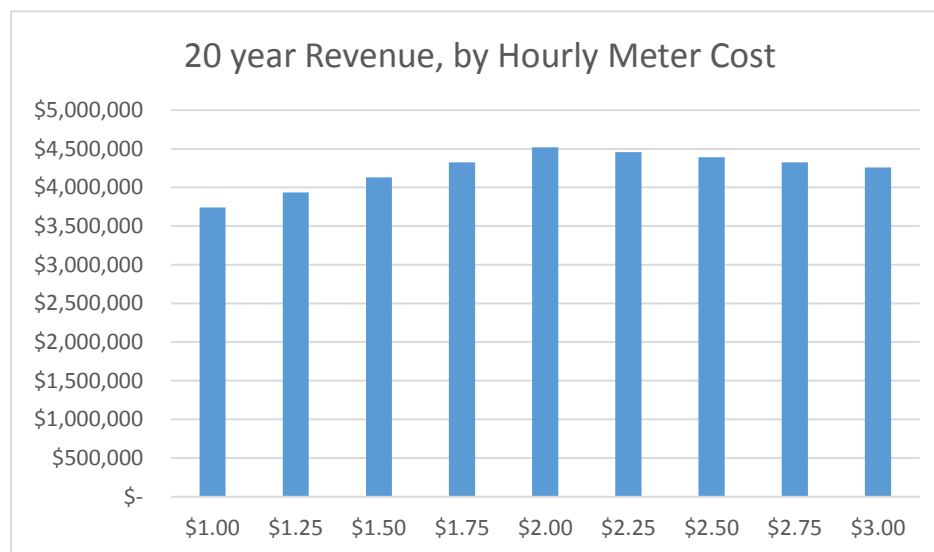
All of the analysis data is included in the tables and charts located at the end of this analysis. In summary, *all parking fee calculations proved to be cost-effective over a 20-year cycle.*

The Net Present Value was calculated using a 0.05 reduction factor applied over the 20 year life cycle, to determine present day net revenue. These are presented below:

Net Present Value			
	\$1 hour fee	\$2 hour fee	\$3 hour fee
Full-Time Enforcement	\$ 297,341	\$ 769,345	\$ 612,010
Part-Time Enforcement	\$ 1,205,566	\$ 1,677,571	\$ 1,520,236
Without Enforcement	\$ 1,267,842	\$ 1,669,046	\$ 1,535,311

Sensitivity Analysis

The hourly parking fee was compared against revenue to determine the appropriate fee. Using the calculated meter revenue and parking utilization assumptions listed under the Estimated Annual Revenue section, an hourly fee of \$2 is anticipated to generate the highest revenue, as shown bar graph below. However, the parking utilization is highly subjective, therefore the estimates should be considered speculative in nature.



Conclusion

In conclusion, it is recommended that the City of Redondo implement Pay-by-Display parking meters at the locations shown in Project 2 of Section 6 of the Redondo Parking Management Plan. These meters should be initially set at a fee of \$1 to \$2 per hour, and the City should strongly consider providing a part-time enforcement officer for the area to avoid the possible negative impacts of vehicles violating the residential areas.

It should be noted that the recommended pricing structure is not rigid and should be observed over time after implementation to ensure that the parking meter rate structure, amount of enforcement and generated revenue meets expectations while managing effective parking utilization and compliance for the area. The City should closely monitor and adjust the parking fees as necessary, as well as the continued need and amount of enforcement.

Multi-space Parking Meter Life-Cycle Cost Analysis
Redondo Way, S 282nd Street and Sound View Drive
\$1 per hour fee

Parking Meter Equipment, Maintenance & Operations		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Total			
Meters (10)	\$	70,000					\$	28,389	\$	29,524	\$	30,705		\$	37,357	\$	38,852	\$	40,406		\$	49,160	\$	324,392	
Keys	\$	600																				\$	600		
Mounting Pedestals	\$	3,000																				\$	7,441		
Delivery	\$	8,000										\$	4,441									\$	37,073		
Setup, Testing & Training	\$	5,000					\$	3,244	\$	3,374	\$	3,509		\$	4,269	\$	4,440	\$	4,618			\$	5,618		
Merchant Account Setup	\$	200																				\$	200		
Yearly Service Charge*	\$	13,200	\$	13,200	\$	13,200	\$	13,200	\$	13,200	\$	16,000	\$	16,000	\$	16,000	\$	18,000	\$	18,000	\$	18,000	\$	312,400	
Paper	\$	4,000	\$	2,000	\$	2,080	\$	2,163	\$	2,250	\$	2,340	\$	2,433	\$	2,531	\$	2,632	\$	2,737	\$	2,847	\$	59,342	
Extra Coin Boxes	\$	5,000																					\$	20,238	
Signage	\$	2,500	\$	200	\$	208	\$	216	\$	225	\$	234	\$	243	\$	253	\$	263	\$	274	\$	285	\$	296	
Extended Warrantee				\$	8,550	\$	8,816	\$	9,082	\$	9,348	\$	9,633	\$	9,918	\$	10,203	\$	10,488	\$	10,773	\$	11,058	\$	11,343

* Central Management System = Software Management & Reporting Tools

[illegible]

* Central Management System = Software Management & Reporting Tools

Total Expenditures (with Full Time Enforcement)	\$	221,693	\$	91,707	\$	104,019	\$	107,379	\$	110,861	\$	149,109	\$	154,258	\$	206,271	\$	129,246	\$	138,303	\$	137,790	\$	142,301	\$	192,561	\$	199,238	\$	259,641	\$	164,283	\$	169,704	\$	175,329	\$	181,167	\$	247,207	\$	3,282,065
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<i>Weekend Enforcement during April-September (Private Company @ 52 days, 8 hours per day)</i>	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Total
All inclusive cost as quoted by Diamond Parking	\$ 23,036	\$ 23,957	\$ 24,916	\$ 25,912	\$ 26,949	\$ 28,027	\$ 29,148	\$ 30,314	\$ 31,526	\$ 32,787	\$ 34,099	\$ 35,463	\$ 36,881	\$ 38,357	\$ 39,891	\$ 41,487	\$ 43,146	\$ 44,872	\$ 46,667	\$ 48,533	\$ 685,968
Total:	\$ 23,036	\$ 23,957	\$ 24,916	\$ 25,912	\$ 26,949	\$ 28,027	\$ 29,148	\$ 30,314	\$ 31,526	\$ 32,787	\$ 34,099	\$ 35,463	\$ 36,881	\$ 38,357	\$ 39,891	\$ 41,487	\$ 43,146	\$ 44,872	\$ 46,667	\$ 48,533	\$ 685,968

Total Expenditures (with Part Time Enforcement)	\$	145,129	\$	40,820	\$	51,237	\$	52,625	\$	54,057	\$	90,173	\$	93,105	\$	106,411	\$	63,389	\$	69,951	\$	66,844	\$	68,657	\$	116,112	\$	119,871	\$	135,439	\$	78,725	\$	80,863	\$	83,075	\$	85,362	\$	147,711	\$	1,749,557
Revenue - \$1 per hour		Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Year 7		Year 8		Year 9		Year 10		Year 11		Year 12		Year 13		Year 14		Year 15		Year 16		Year 17		Year 18		Year 19		Year 20		Total
# spaces		89																																								
Summer utilization		57%																																								
Weekend		75%																																								
Weekday		50%																																								
Off peak utilization (25% of summer)		14%																																								
Typical annual utilization (80% Off peak, 20% Summer)		23%																																								
Parking cost per hour	\$	1																																								
Hours collected per day		8																																								
Daily revenue	\$	160																																								
Parking Meter Revenue Subtotal	\$	58,000	\$	58,000	\$	58,000	\$	58,000	\$	63,800	\$	63,800	\$	63,800	\$	63,800	\$	63,800	\$	70,180	\$	70,180	\$	70,180	\$	70,180	\$	70,180	\$	77,198	\$	77,198	\$	77,198	\$	77,198	\$	77,198	\$	84,918	\$	1,372,808
Revenue from Marina Lot (not included above)	\$	100,000	\$	100,000	\$	100,000	\$	100,000	\$	110,000	\$	110,000	\$	110,000	\$	110,000	\$	110,000	\$	121,000	\$	121,000	\$	121,000	\$	121,000	\$	121,000	\$	133,100	\$	133,100	\$	133,100	\$	133,100	\$	133,100	\$	146,410	\$	2,366,910
Annual revenue, with enforcement	\$	158,000	\$	158,000	\$	158,000	\$	158,000	\$	173,800	\$	173,800	\$	173,800	\$	173,800	\$	173,800	\$	191,180	\$	191,180	\$	191,180	\$	191,180	\$	191,180	\$	210,298	\$	210,298	\$	210,298	\$	210,298	\$	210,298	\$	231,328	\$	3,739,718
Annual revenue, without enforcement (less 15%)	\$	134,300	\$	134,300	\$	134,300	\$	134,300	\$	147,730	\$	147,730	\$	147,730	\$	147,730	\$	147,730	\$	162,503	\$	162,503	\$	162,503	\$	162,503	\$	162,503	\$	178,753	\$	178,753	\$	178,753	\$	178,753	\$	178,753	\$	196,629	\$	3,178,761

[illegible]

Multi-space Parking Meter Life-Cycle Cost Analysis
Redondo Way, S 282nd Street and Sound View Drive
\$2 per hour fee

Metering Meter Equipment, Maintenance & Operations		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Total	
Meters (10)	\$	70,000					\$ 28,389	\$ 29,524	\$ 30,705					\$ 37,357	\$ 38,852	\$ 40,406					\$ 49,160	\$ 324,392	
Keys	\$	600																				\$ 600	
Mounting Pedestals	\$	3,000								\$ 4,441												\$ 7,441	
Delivery	\$	8,000					\$ 3,244	\$ 3,374	\$ 3,509					\$ 4,269	\$ 4,440	\$ 4,618					\$ 5,618	\$ 37,073	
Setup, Testing & Training	\$	5,000																				\$ 5,000	
Merchant Account Setup	\$	200																				\$ 200	
Yearly Service Charge*	\$	13,200	\$ 13,200	\$ 13,200	\$ 13,200	\$ 13,200	\$ 13,200	\$ 13,200	\$ 16,000	\$ 16,000	\$ 16,000	\$ 16,000	\$ 16,000	\$ 16,000	\$ 16,000	\$ 18,000	\$ 18,000	\$ 18,000	\$ 18,000	\$ 18,000	\$ 18,000	\$ 312,400	
Paper	\$	4,000	\$ 2,000	\$ 2,080	\$ 2,163	\$ 2,250	\$ 2,340	\$ 2,433	\$ 2,531	\$ 2,632	\$ 2,737	\$ 2,847	\$ 2,960	\$ 3,079	\$ 3,202	\$ 3,330	\$ 3,463	\$ 3,602	\$ 3,746	\$ 3,896	\$ 4,052	\$ 59,342	
Extra Coin Boxes	\$	5,000							\$ 6,580							\$ 8,658						\$ 20,238	
Signage	\$	2,500	\$ 200	\$ 208	\$ 216	\$ 225	\$ 234	\$ 243	\$ 253	\$ 263	\$ 274	\$ 285	\$ 296	\$ 308	\$ 320	\$ 333	\$ 346	\$ 360	\$ 375	\$ 390	\$ 405	\$ 8,034	
Extended Warrantee				\$ 8,550	\$ 8,816	\$ 9,082	\$ 9,348	\$ 9,633	\$ 9,918	\$ 10,203	\$ 10,488	\$ 10,773	\$ 11,058	\$ 11,343	\$ 11,628	\$ 11,913	\$ 12,198	\$ 12,483	\$ 12,768	\$ 13,053	\$ 13,338	\$ 196,593	
Subtotal:	\$	111,500	\$ 15,400	\$ 24,038	\$ 24,396	\$ 24,757	\$ 56,755	\$ 58,408	\$ 69,496	\$ 29,098	\$ 33,940	\$ 29,904	\$ 30,315	\$ 72,357	\$ 74,442	\$ 87,258	\$ 34,008	\$ 34,445	\$ 34,889	\$ 35,338	\$ 90,573	\$ 971,314	
9.5 % Sales Tax	\$	10,593	\$ 1,463	\$ 2,284	\$ 2,318	\$ 2,352	\$ 5,392	\$ 5,549	\$ 6,602	\$ 2,764	\$ 3,224	\$ 2,841	\$ 2,880	\$ 6,874	\$ 7,072	\$ 8,290	\$ 3,231	\$ 3,272	\$ 3,314	\$ 3,357	\$ 8,604	\$ 92,275	
Total:	\$	122,093	\$ 16,863	\$ 26,322	\$ 26,713	\$ 27,109	\$ 62,146	\$ 63,957	\$ 76,098	\$ 31,862	\$ 37,164	\$ 32,745	\$ 33,194	\$ 79,231	\$ 81,514	\$ 95,548	\$ 37,238	\$ 37,717	\$ 38,203	\$ 38,696	\$ 99,177	\$ 1,063,589	
* Central Management System = Software Management & Reporting Tools																						\$	-
Full Time Enforcement (City Staff/person)																							
Salaries*	\$	50,000	\$ 52,000	\$ 54,080	\$ 56,243	\$ 58,493	\$ 60,833	\$ 63,266	\$ 65,797	\$ 68,428	\$ 71,166	\$ 74,012	\$ 76,973	\$ 80,052	\$ 83,254	\$ 86,584	\$ 90,047	\$ 93,649	\$ 97,395	\$ 101,291	\$ 105,342	\$ 1,488,904	
Benefits	\$	16,000	\$ 16,640	\$ 17,306	\$ 17,998	\$ 18,718	\$ 19,466	\$ 20,245	\$ 21,055	\$ 21,897	\$ 22,773	\$ 23,684	\$ 24,631	\$ 25,617	\$ 26,641	\$ 27,707	\$ 28,815	\$ 29,968	\$ 31,166	\$ 32,413	\$ 33,710	\$ 476,449	
Overtime	\$	2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 40,000	
Clothing/Boots	\$	2,000	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 11,500	
Motor Fuel	\$	2,600	\$ 2,704	\$ 2,812	\$ 2,925	\$ 3,042	\$ 3,163	\$ 3,290	\$ 3,421	\$ 3,558	\$ 3,701	\$ 3,849	\$ 4,003	\$ 4,163	\$ 4,329	\$ 4,502	\$ 4,682	\$ 4,870	\$ 5,065	\$ 5,267	\$ 5477.807858	\$ 77,423	
Vehicle Retrofit	\$	2,000							\$ 2,400							\$ 2,800						\$ 7,200	
New Vehicle	\$	20,000							\$ 30,000							\$ 35,000						\$ 85,000	
Cell Phones	\$	1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 20,000	
Radio	\$	4,000							\$ 4,000							\$ 4,000						\$ 12,000	
Total:	\$	99,600	\$ 74,844	\$ 77,698	\$ 80,666	\$ 83,752	\$ 86,962	\$ 90,301	\$ 130,173	\$ 97,384	\$ 101,139	\$ 105,045	\$ 109,107	\$ 113,331	\$ 117,724	\$ 164,093	\$ 127,045	\$ 131,987	\$ 137,126	\$ 142,471	\$ 148,030	\$ 2,218,476	
* Central Management System = Software Management & Reporting Tools																						\$	-
Total Expenditures (with Full Time Enforcement)		\$ 221,693	\$ 91,707	\$ 104,019	\$ 107,379	\$ 110,861	\$ 149,109	\$ 154,258	\$ 206,271	\$ 129,246	\$ 138,303	\$ 137,790	\$ 142,301	\$ 192,561	\$ 199,238	\$ 259,641	\$ 164,283	\$ 169,704	\$ 175,329	\$ 181,167	\$ 247,207	\$ 3,282,065	
Weekend Enforcement during April-September (Private Company @ 52 days, 8 hours per day)																							
All inclusive cost as quoted by Diamond Parking	\$	23,036	\$ 23,957	\$ 24,916	\$ 25,912	\$ 26,949	\$ 28,027	\$ 29,148	\$ 30,314	\$ 31,526	\$ 32,787	\$ 34,099	\$ 35,463	\$ 36,881	\$ 38,357	\$ 39,891	\$ 41,487	\$ 43,146	\$ 44,872	\$ 46,667	\$ 48,533	\$ 685,968	
Total:	\$	23,036	\$ 23,957	\$ 24,916	\$ 25,912	\$ 26,949	\$ 28,027	\$ 29,148	\$ 30,314	\$ 31,526	\$ 32,787	\$ 34,099	\$ 35,463	\$ 36,881	\$ 38,357	\$ 39,891	\$ 41,487	\$ 43,146	\$ 44,872	\$ 46,667	\$ 48,533	\$ 685,968	
Total Expenditures (with Part Time Enforcement)		\$ 145,129	\$ 40,820	\$ 51,237	\$ 52,625	\$ 54,057	\$ 90,173	\$ 93,105	\$ 106,411	\$ 63,389	\$ 69,951	\$ 66,844	\$ 68,657	\$ 116,112	\$ 119,871	\$ 135,439	\$ 78,725	\$ 80,863	\$ 83,075	\$ 85,362	\$ 147,711	\$ 1,749,557	
Revenue - \$2 per hour																							
# spaces		89																					
Summer utilization		49%																					
Weekend		70%																					
Weekday		40%																					
Off peak utilization (20% of summer)		10%																					
Typical annual utilization (80% Off peak, 20% Summer)		17%																					
Parking cost per hour	\$	2																					
Hours collected per day		8																					
Daily revenue	\$	250																					
Parking Meter Revenue Subtotal	\$	91,000	\$ 91,000	\$ 91,000	\$ 91,000	\$ 100,100	\$ 100,100	\$ 100,100	\$ 100,100	\$ 100,100	\$ 110,110	\$ 110,110	\$ 110,110	\$ 110,110	\$ 110,110	\$ 121,121	\$ 121,121	\$ 121,121	\$ 121,121	\$ 121,121	\$ 133,233	\$ 2,153,888	
Revenue from Marina Lot (not included above)	\$	100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 110,000	\$ 110,000	\$ 110,000	\$ 110,000	\$ 110,000	\$ 121,000	\$ 121,000	\$ 121,000	\$ 121,000	\$ 121,000	\$ 133,100	\$ 133,100	\$ 133,100	\$ 133,100	\$ 133,100	\$ 146,410	\$ 2,366,910	
Annual revenue, with enforcement	\$	191,000	\$ 191,000	\$ 191,000	\$ 191,000	\$ 210,100	\$ 210,100	\$ 210,100	\$ 210,100	\$ 210,100	\$ 231,110	\$ 231,110	\$ 231,110	\$ 231,110	\$ 231,110	\$ 254,221	\$ 254,221	\$ 254,221	\$ 254,221	\$ 254,221	\$ 279,643	\$ 4,520,798	
Annual revenue, without enforcement (less 15%)	\$	162,350	\$ 162,350	\$ 162,350	\$ 162,350	\$ 178,585	\$ 178,585	\$ 178,585	\$ 178,585	\$ 178,585	\$ 196,444	\$ 196,444	\$ 196,444	\$ 196,444	\$ 196,444	\$ 216,088	\$ 216,088	\$ 216,088	\$ 216,088	\$ 216,088	\$ 237,697	\$ 3,842,678	
																						Net Present Value	
Net Annual Revenue, with Full-Time Enforcement	\$	(30,693)	\$ 99,293	\$ 86,981	\$ 83,621	\$ 99,239	\$ 60,991	\$ 55,842	\$ 3,829	\$ 80,854	\$ 92,807	\$ 93,320	\$ 88,809	\$ 38,549	\$ 31,872	\$ (5,420)	\$ 89,938	\$ 84,517	\$ 78,892	\$ 73,054	\$ 32,436	\$ 1,238,733	\$ 769,345
Net Annual Revenue, with Part-Time Enforcement	\$	45,872	\$ 150,180	\$ 139,763	\$ 138,375	\$ 156,043	\$ 119,927	\$ 116,995	\$ 103,689	\$ 146,711	\$ 161,159	\$ 164,266	\$ 162,453	\$ 114,998	\$ 111,239	\$ 118,782	\$ 175,496	\$ 173,358	\$ 171,146	\$ 168,859	\$ 131,932	\$ 2,771,241	\$ 1,677,571
Net Annual Revenue, without Enforcement	\$	40,258	\$ 145,487	\$ 136,028	\$ 135,637	\$ 151,476	\$ 116,439	\$ 114,628	\$ 102,487	\$ 146,723	\$ 159,280	\$ 163,698	\$ 163,249	\$ 117,213	\$ 114,929	\$ 120,540	\$ 178,849	\$ 178,370	\$ 177,885	\$ 177,392	\$ 138,519	\$ 2,779,089	\$ 1,669,046

Multi-space Parking Meter Life-Cycle Cost Analysis
Redondo Way, S 282nd Street and Sound View Drive
\$3 per hour fee

Parking Meter Equipment, Maintenance & Operations		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Total	
Meters (10)	\$	70,000					\$ 28,389	\$ 29,524	\$ 30,705					\$ 37,357	\$ 38,852	\$ 40,406					\$ 49,160	\$ 324,392	
Keys	\$	600																				\$ 600	
Mounting Pedestals	\$	3,000											4,441									\$ 7,441	
Delivery	\$	8,000					\$ 3,244	\$ 3,374	\$ 3,509					\$ 4,269	\$ 4,440	\$ 4,618					\$ 5,618	\$ 37,073	
Setup, Testing & Training	\$	5,000																				\$ 5,000	
Merchant Account Setup	\$	200																				\$ 200	
Yearly Service Charge*	\$	13,200	\$ 13,200	\$ 13,200	\$ 13,200	\$ 13,200	\$ 13,200	\$ 13,200	\$ 16,000	\$ 16,000	\$ 16,000	\$ 16,000	\$ 16,000	\$ 16,000	\$ 16,000	\$ 18,000	\$ 18,000	\$ 18,000	\$ 18,000	\$ 18,000	\$ 18,000	\$ 312,400	
Paper	\$	4,000	\$ 2,000	\$ 2,080	\$ 2,163	\$ 2,250	\$ 2,340	\$ 2,433	\$ 2,531	\$ 2,632	\$ 2,737	\$ 2,847	\$ 2,960	\$ 3,079	\$ 3,202	\$ 3,330	\$ 3,463	\$ 3,602	\$ 3,746	\$ 3,896	\$ 4,052	\$ 59,342	
Extra Coin Boxes	\$	5,000							\$ 6,580							\$ 8,658						\$ 20,238	
Signage	\$	2,500	\$ 200	\$ 208	\$ 216	\$ 225	\$ 234	\$ 243	\$ 253	\$ 263	\$ 274	\$ 285	\$ 296	\$ 308	\$ 320	\$ 333	\$ 346	\$ 360	\$ 375	\$ 390	\$ 405	\$ 8,034	
Extended Warrantee				\$ 8,550	\$ 8,816	\$ 9,082	\$ 9,348	\$ 9,633	\$ 9,918	\$ 10,203	\$ 10,488	\$ 10,773	\$ 11,058	\$ 11,343	\$ 11,628	\$ 11,913	\$ 12,198	\$ 12,483	\$ 12,768	\$ 13,053	\$ 13,338	\$ 196,593	
Subtotal:	\$	111,500	\$ 15,400	\$ 24,038	\$ 24,396	\$ 24,757	\$ 56,755	\$ 58,408	\$ 69,496	\$ 29,098	\$ 33,940	\$ 29,904	\$ 30,315	\$ 72,357	\$ 74,442	\$ 87,258	\$ 34,008	\$ 34,445	\$ 34,889	\$ 35,338	\$ 90,573	\$ 971,314	
9.5 % Sales Tax	\$	10,593	\$ 1,463	\$ 2,284	\$ 2,318	\$ 2,352	\$ 5,392	\$ 5,549	\$ 6,602	\$ 2,764	\$ 3,224	\$ 2,841	\$ 2,880	\$ 6,874	\$ 7,072	\$ 8,290	\$ 3,231	\$ 3,272	\$ 3,314	\$ 3,357	\$ 8,604	\$ 92,275	
Total:	\$	122,093	\$ 16,863	\$ 26,322	\$ 26,713	\$ 27,109	\$ 62,146	\$ 63,957	\$ 76,098	\$ 31,862	\$ 37,164	\$ 32,745	\$ 33,194	\$ 79,231	\$ 81,514	\$ 95,548	\$ 37,238	\$ 37,717	\$ 38,203	\$ 38,696	\$ 99,177	\$ 1,063,589	
* Central Management System = Software Management & Reporting Tools																						\$	-
Full Time Enforcement (City Staff/person)																							
Salaries*	\$	50,000	\$ 52,000	\$ 54,080	\$ 56,243	\$ 58,493	\$ 60,833	\$ 63,266	\$ 65,797	\$ 68,428	\$ 71,166	\$ 74,012	\$ 76,973	\$ 80,052	\$ 83,254	\$ 86,584	\$ 90,047	\$ 93,649	\$ 97,395	\$ 101,291	\$ 105,342	\$ 1,488,904	
Benefits	\$	16,000	\$ 16,640	\$ 17,306	\$ 17,998	\$ 18,718	\$ 19,466	\$ 20,245	\$ 21,055	\$ 21,897	\$ 22,773	\$ 23,684	\$ 24,631	\$ 25,617	\$ 26,641	\$ 27,707	\$ 28,815	\$ 29,968	\$ 31,166	\$ 32,413	\$ 33,710	\$ 476,449	
Overtime	\$	2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 40,000	
Clothing/Boots	\$	2,000	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 11,500	
Motor Fuel	\$	2,600	\$ 2,704	\$ 2,812	\$ 2,925	\$ 3,042	\$ 3,163	\$ 3,290	\$ 3,421	\$ 3,558	\$ 3,701	\$ 3,849	\$ 4,003	\$ 4,163	\$ 4,329	\$ 4,502	\$ 4,682	\$ 4,870	\$ 5,065	\$ 5,267	\$ 5477.807858	\$ 77,423	
Vehicle Retrofit	\$	2,000							\$ 2,400							\$ 2,800						\$ 7,200	
New Vehicle	\$	20,000							\$ 30,000							\$ 35,000						\$ 85,000	
Cell Phones	\$	1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 20,000	
Radio	\$	4,000							\$ 4,000							\$ 4,000						\$ 12,000	
Total:	\$	99,600	\$ 74,844	\$ 77,698	\$ 80,666	\$ 83,752	\$ 86,962	\$ 90,301	\$ 130,173	\$ 97,384	\$ 101,139	\$ 105,045	\$ 109,107	\$ 113,331	\$ 117,724	\$ 164,093	\$ 127,045	\$ 131,987	\$ 137,126	\$ 142,471	\$ 148,030	\$ 2,218,476	
* Central Management System = Software Management & Reporting Tools																						\$	-
Total Expenditures (with Full Time Enforcement)		\$ 221,693	\$ 91,707	\$ 104,019	\$ 107,379	\$ 110,861	\$ 149,109	\$ 154,258	\$ 206,271	\$ 129,246	\$ 138,303	\$ 137,790	\$ 142,301	\$ 192,561	\$ 199,238	\$ 259,641	\$ 164,283	\$ 169,704	\$ 175,329	\$ 181,167	\$ 247,207	\$ 3,282,065	
Weekend Enforcement during April-September (Private Company @ 52 days, 8 hours per day)																							
All inclusive cost as quoted by Diamond Parking	\$	23,036	\$ 23,957	\$ 24,916	\$ 25,912	\$ 26,949	\$ 28,027	\$ 29,148	\$ 30,314	\$ 31,526	\$ 32,787	\$ 34,099	\$ 35,463	\$ 36,881	\$ 38,357	\$ 39,891	\$ 41,487	\$ 43,146	\$ 44,872	\$ 46,667	\$ 48,533	\$ 685,968	
Total:	\$	23,036	\$ 23,957	\$ 24,916	\$ 25,912	\$ 26,949	\$ 28,027	\$ 29,148	\$ 30,314	\$ 31,526	\$ 32,787	\$ 34,099	\$ 35,463	\$ 36,881	\$ 38,357	\$ 39,891	\$ 41,487	\$ 43,146	\$ 44,872	\$ 46,667	\$ 48,533	\$ 685,968	
Total Expenditures (with Part Time Enforcement)		\$ 145,129	\$ 40,820	\$ 51,237	\$ 52,625	\$ 54,057	\$ 90,173	\$ 93,105	\$ 106,411	\$ 63,389	\$ 69,951	\$ 66,844	\$ 68,657	\$ 116,112	\$ 119,871	\$ 135,439	\$ 78,725	\$ 80,863	\$ 83,075	\$ 85,362	\$ 147,711	\$ 1,749,557	
Revenue - \$3 per hour																							
# spaces		89																					
Summer utilization		36%																					
Weekend		65%																					
Weekday		25%																					
Off peak utilization (10% of summer)		4%																					
Typical annual utilization (80% Off peak, 20% Summer)		10%																					
Parking cost per hour	\$	3																					
Hours collected per day		8																					
Daily revenue	\$	220																					
Parking Meter Revenue Subtotal	\$	80,000	\$ 80,000	\$ 80,000	\$ 80,000	\$ 88,000	\$ 88,000	\$ 88,000	\$ 88,000	\$ 88,000	\$ 96,800	\$ 96,800	\$ 96,800	\$ 96,800	\$ 96,800	\$ 106,480	\$ 106,480	\$ 106,480	\$ 106,480	\$ 106,480	\$ 117,128	\$ 1,893,528	
Revenue from Marina Lot (not included above)	\$	100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 110,000	\$ 110,000	\$ 110,000	\$ 110,000	\$ 110,000	\$ 121,000	\$ 121,000	\$ 121,000	\$ 121,000	\$ 121,000	\$ 133,100	\$ 133,100	\$ 133,100	\$ 133,100	\$ 133,100	\$ 146,410	\$ 2,366,910	
Annual revenue, with enforcement	\$	180,000	\$ 180,000	\$ 180,000	\$ 180,000	\$ 198,000	\$ 198,000	\$ 198,000	\$ 198,000	\$ 198,000	\$ 217,800	\$ 217,800	\$ 217,800	\$ 217,800	\$ 217,800	\$ 239,580	\$ 239,580	\$ 239,580	\$ 239,580	\$ 239,580	\$ 263,538	\$ 4,260,438	
Annual revenue, without enforcement (less 15%)	\$	153,000	\$ 153,000	\$ 153,000	\$ 153,000	\$ 168,300	\$ 168,300	\$ 168,300	\$ 168,300	\$ 168,300	\$ 185,130	\$ 185,130	\$ 185,130	\$ 185,130	\$ 185,130	\$ 203,643	\$ 203,643	\$ 203,643	\$ 203,643	\$ 203,643	\$ 224,007	\$ 3,621,372	
																						Net Present Value	
Net Annual Revenue, with Full-Time Enforcement	\$	(41,693)	\$ 88,293	\$ 75,981	\$ 72,621	\$ 87,139	\$ 48,891	\$ 43,742	\$ (8,271)	\$ 68,754	\$ 79,497	\$ 80,010	\$ 75,499	\$ 25,239	\$ 18,562	\$ (20,061)	\$ 75,297	\$ 69,876	\$ 64,251	\$ 58,413	\$ 16,331	\$ 978,373	
Net Annual Revenue, with Part-Time Enforcement	\$	34,872	\$ 139,180	\$ 128,763	\$ 127,375	\$ 143,943	\$ 107,827	\$ 104,895	\$ 91,589	\$ 134,611	\$ 147,849	\$ 150,956	\$ 149,143	\$ 101,688	\$ 97,929	\$ 104,141	\$ 160,855	\$ 158,717	\$ 156,505	\$ 154,218	\$ 115,827	\$ 2,510,881	
Net Annual Revenue, without Enforcement	\$	30,908	\$ 136,137	\$ 126,678	\$ 126,287	\$ 141,191	\$ 106,154	\$ 104,343	\$ 92,202	\$ 136,438	\$ 147,966	\$ 152,385	\$ 151,936	\$ 105,899	\$ 103,616	\$ 108,095	\$ 166,405	\$ 165,926	\$ 165,440	\$ 164,947	\$ 124,830	\$ 2,557,783	

Revenue based on Parking Fee per Hour

